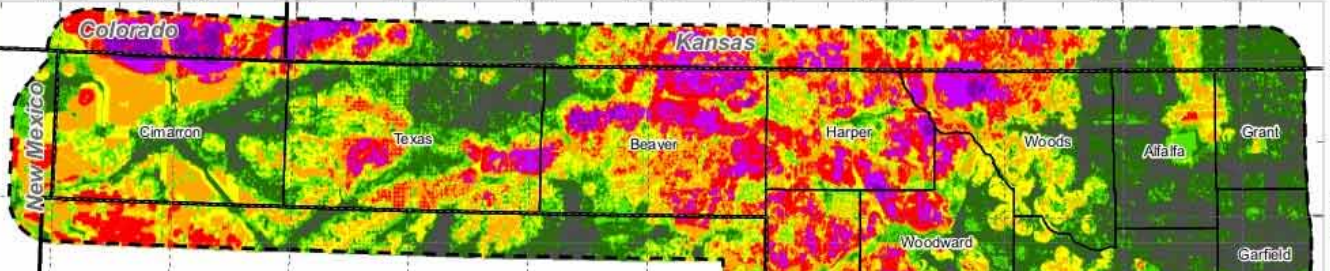


Progress Report on a Revised Land Cover Map for Oklahoma

Dan Hough
Kayti Ewing

Oklahoma Biological Survey



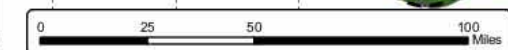


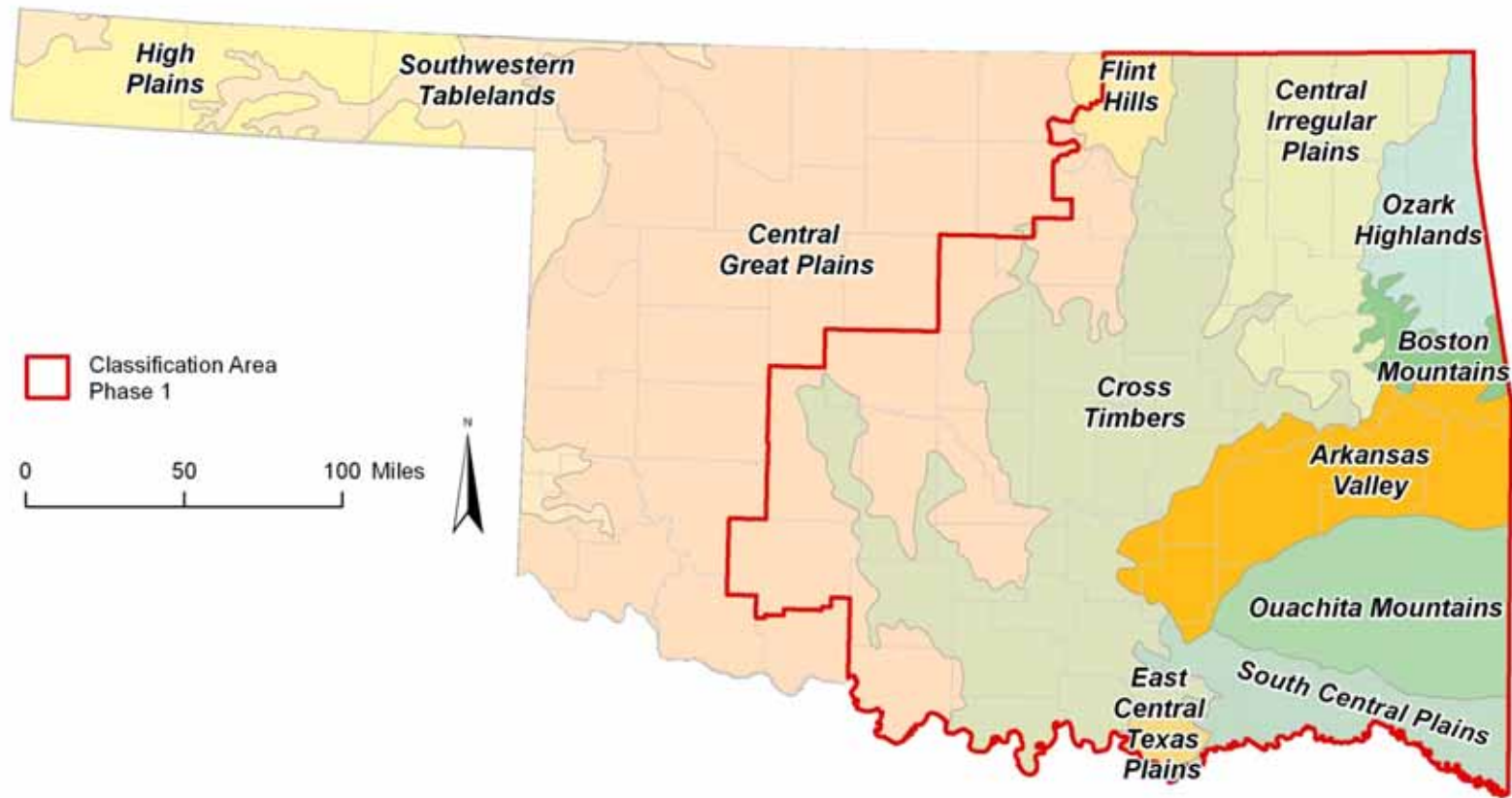
Oklahoma Lesser Prairie-Chicken Spatial Planning Tool

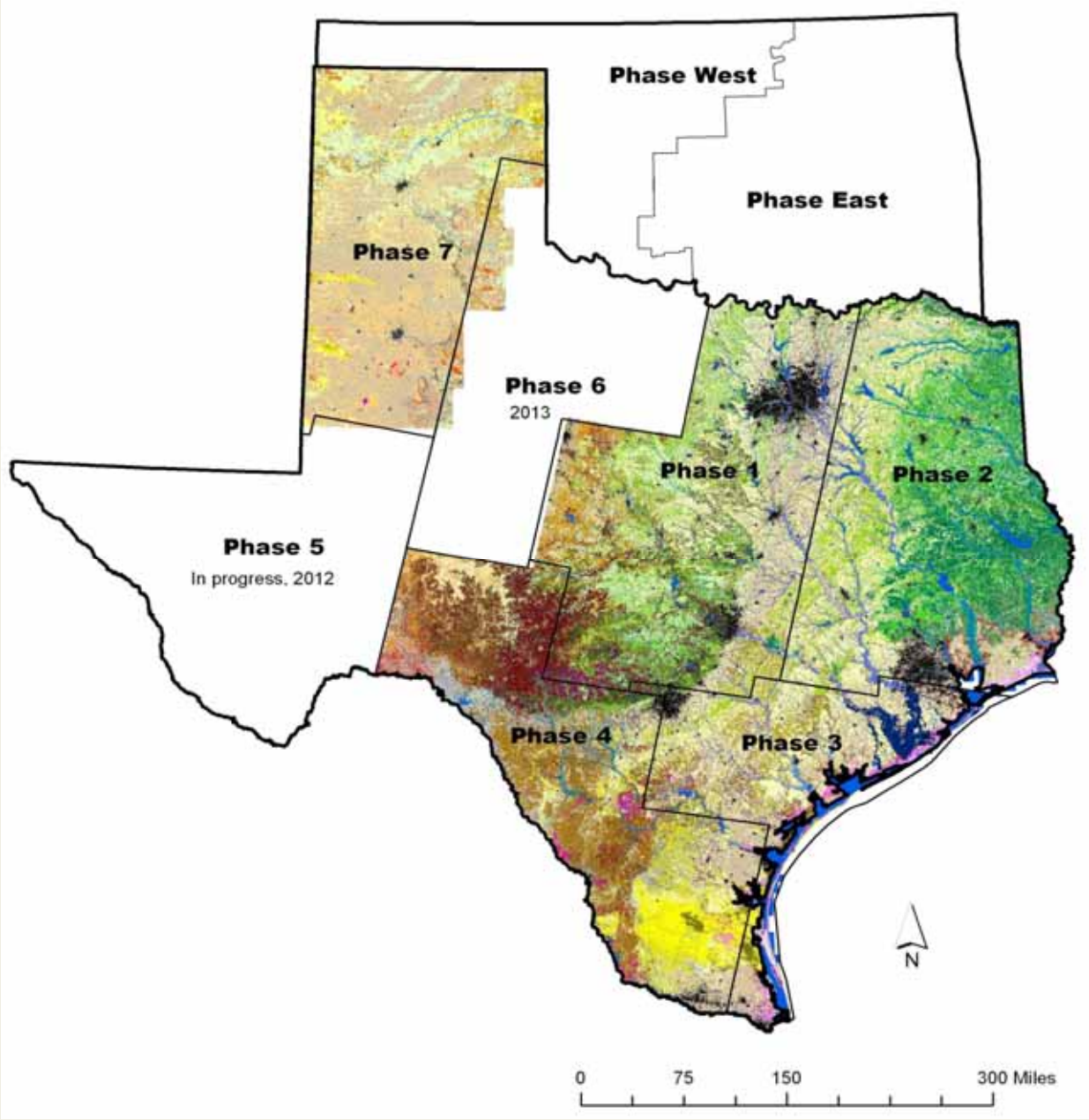
The lesser prairie-chicken (LEPC) model is a multiscale, spatially-based planning tool designed to evaluate anthropogenic impacts, promote voluntary mitigation and targeted conservation actions for an area sensitive species. It combines eight factors, including biological and ecologically relevant spatial data (e.g., lek locations, suitable and potentially suitable land use/land cover) and fragmenting features (e.g., oil and gas well locations, etc.) that exist within the current and historical range of the LEPC. The LEPC model is a relative valuation of the lands within the historical range of the LEPC in Oklahoma.

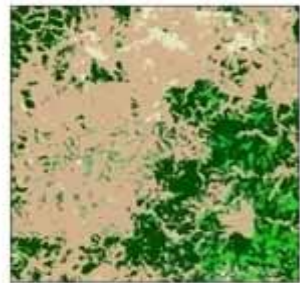


LEPC Model Version 2.0, March 1, 2010. Valid through April 30, 2011; Update available March 1, 2011.
www.wildlifedepartment.com/lepcdevelopmentplanning.htm; 02.24.2010. Projected coordinate system NAD83, UTM Zone 14N





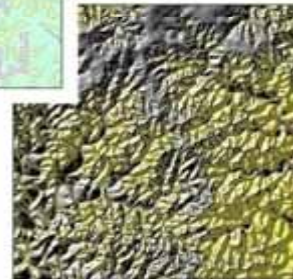




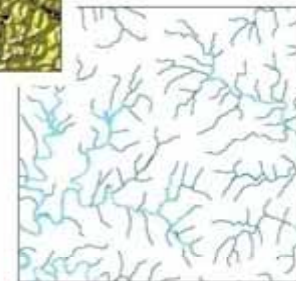
Land Cover



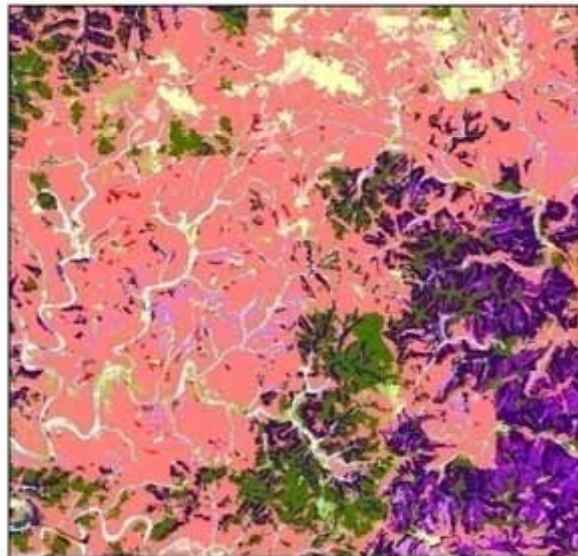
Digital County Soils



Slopes >20% in yellow
Cliffs (slopes>100%) in red

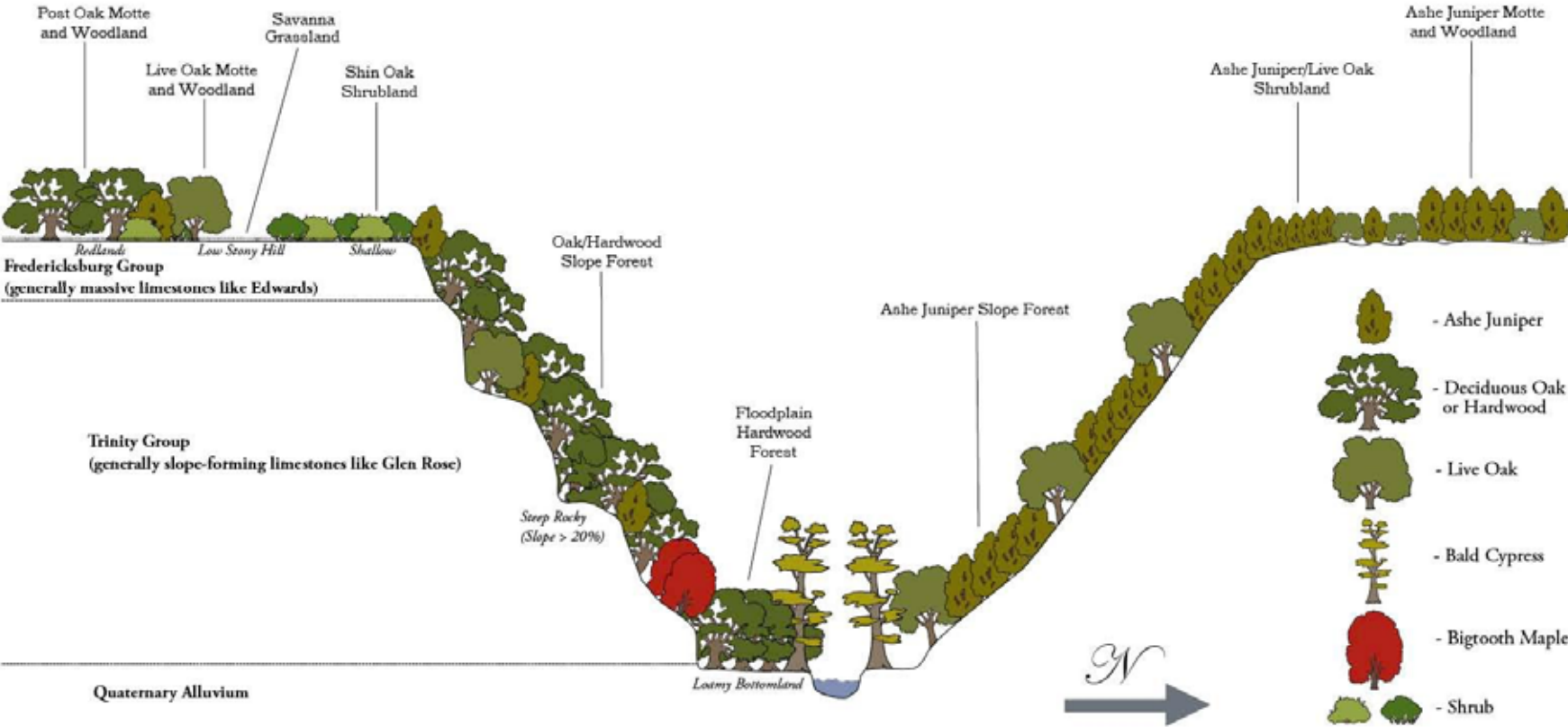


Floodplains & Riparian Zones

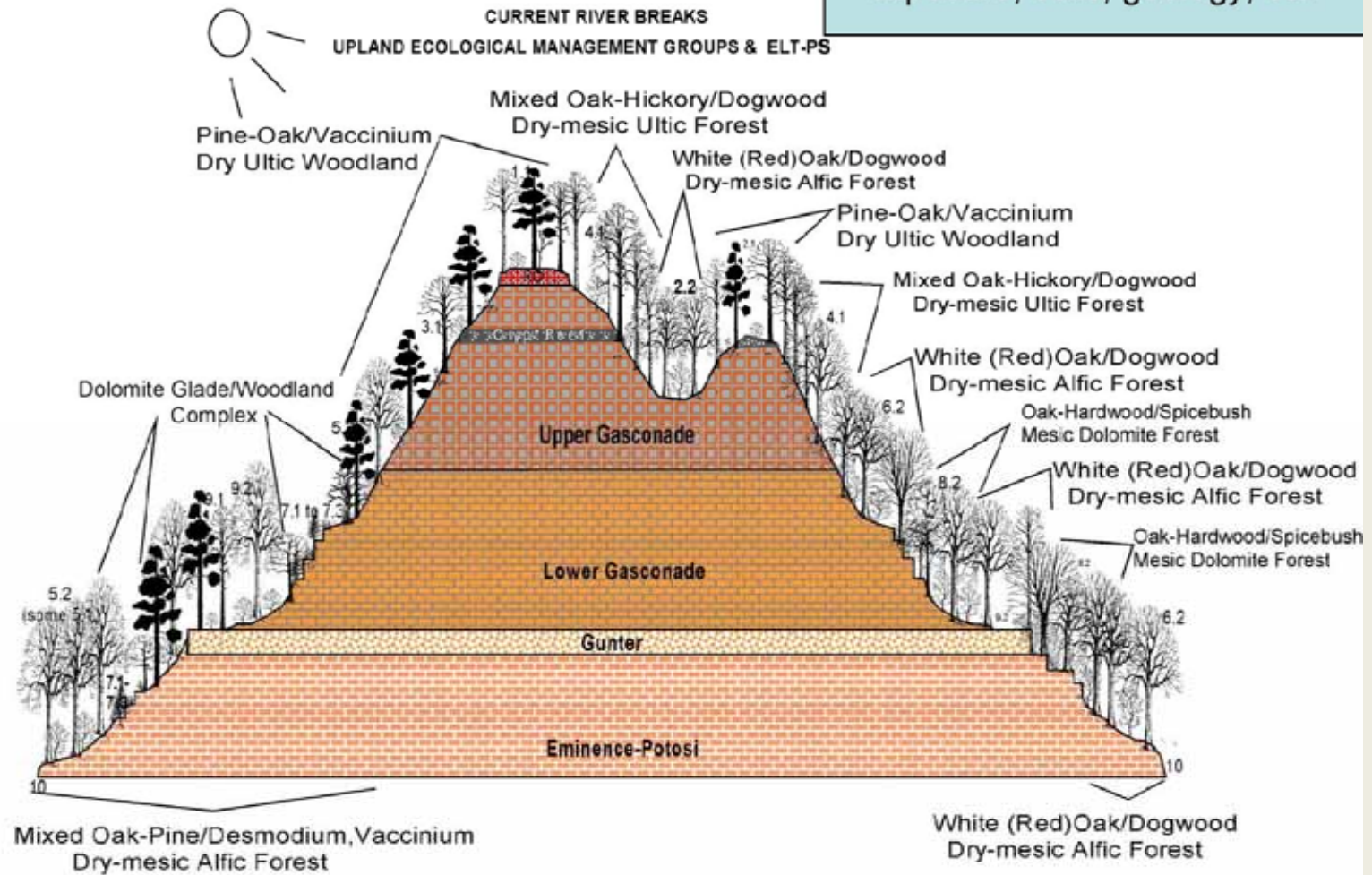


Final Mapped Vegetation Types

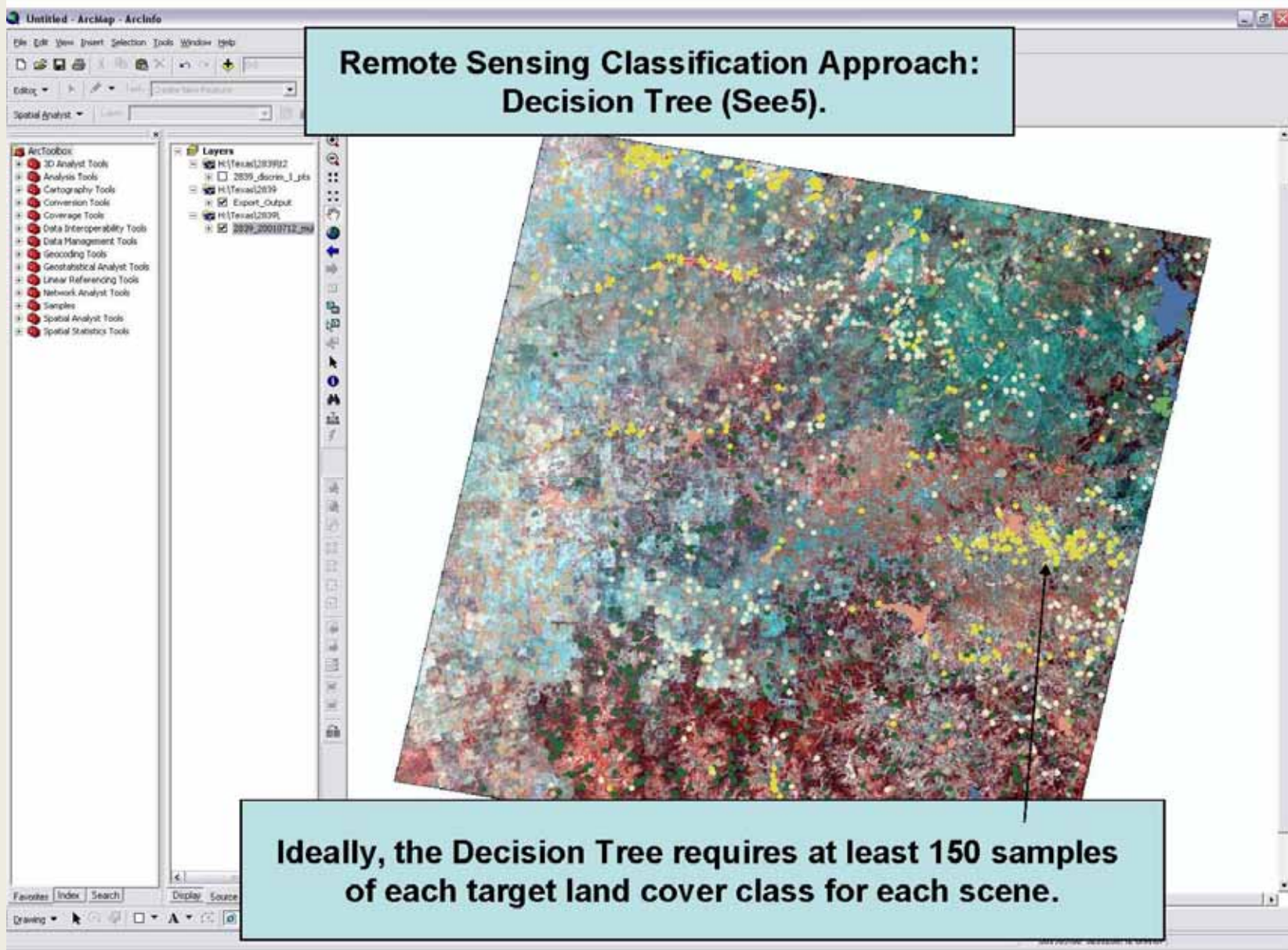
Representative Edwards Plateau Mapped Vegetation



Vegetation is influenced by slope, exposure, soils, geology, etc.

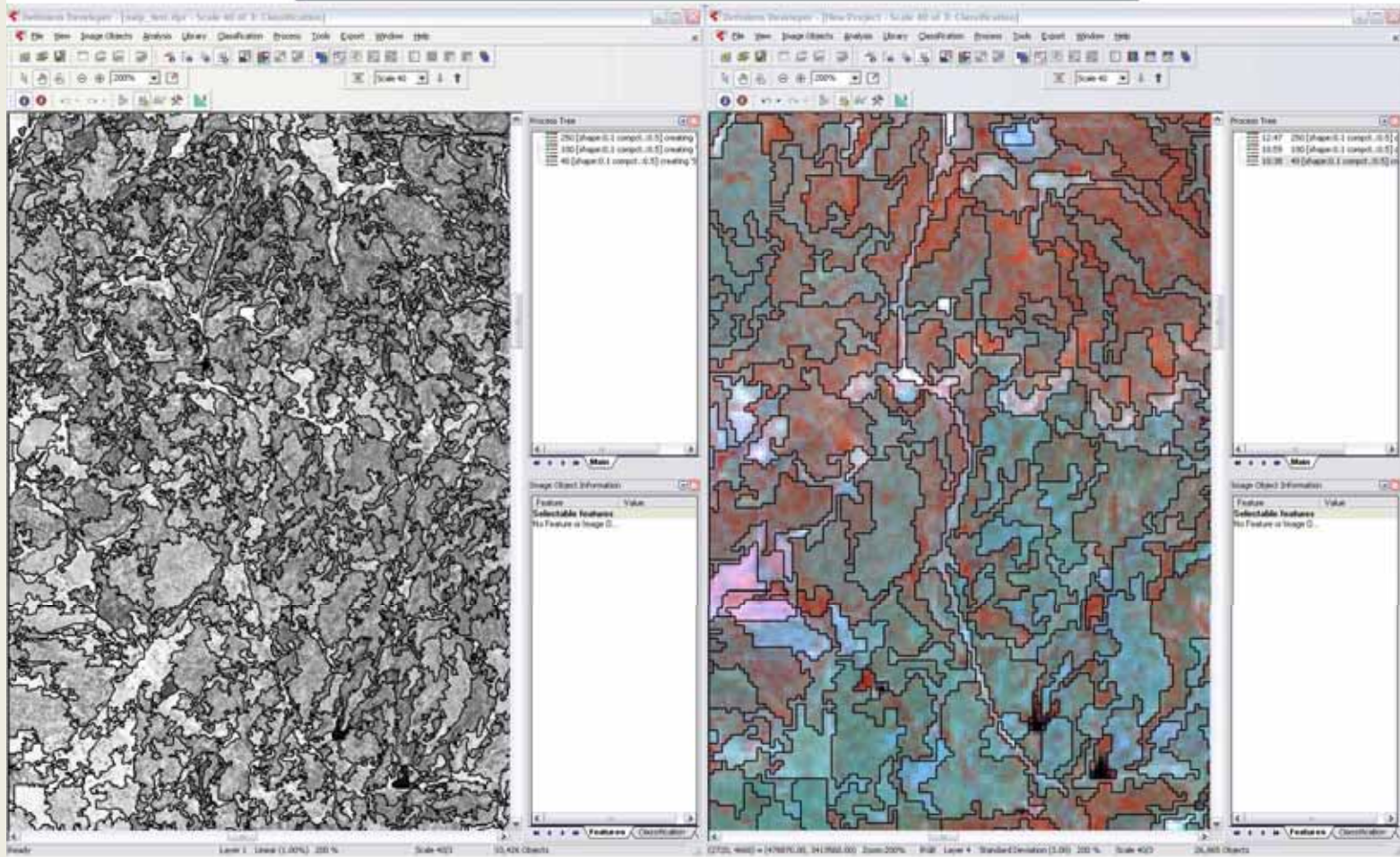


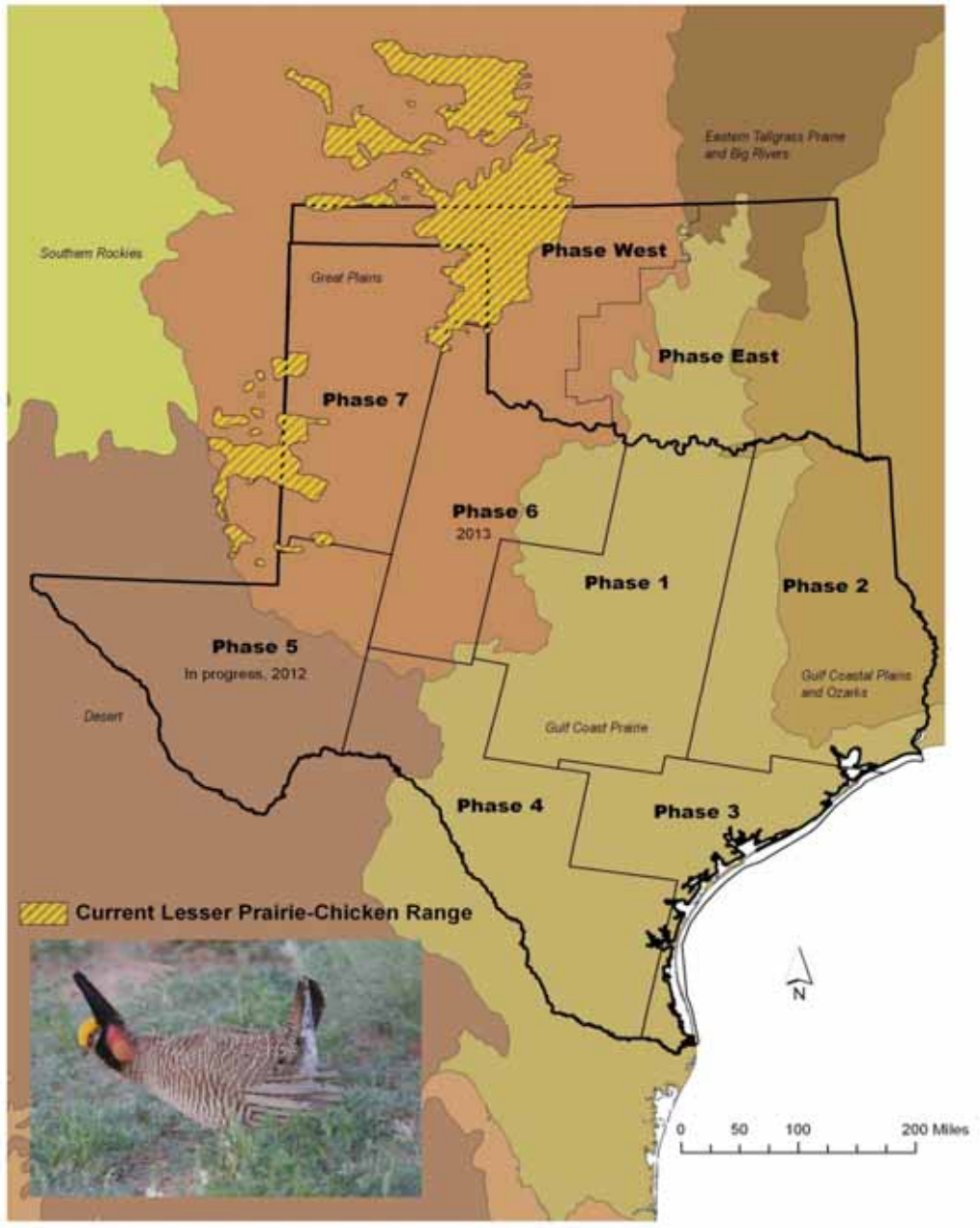
Remote Sensing Classification Approach: Decision Tree (See5).



**Ideally, the Decision Tree requires at least 150 samples
of each target land cover class for each scene.**

Image Objects – Improvement in Spatial Resolution





Field Data Collection

- Ground-Truthing Vegetation Cover and Ecological Systems:
- Methods and Progress

Ecological Systems



Juniper Woodland



Open Water/Marsh



Southeastern Great Plains
Riparian Forest



Crosstimbers Oak Forest



Central Mixed Grass Prairie



Exotic Pasture

Ecological Systems



South Central Riparian
Forest



Ashe Juniper Shrubland



South Central Large-
Interior Floodplain



Pine Plantation (> 3 meters)



Agriculture



Ozark-Ouachita Riparian
Forest

Ecological Systems



Central Interior Calcareous
Glade and Barrens



West Gulf Coastal Plain Large
River Floodplain Forest



Ashe Juniper Woodland



Southeastern Great Plains
Tallgrass Prairie

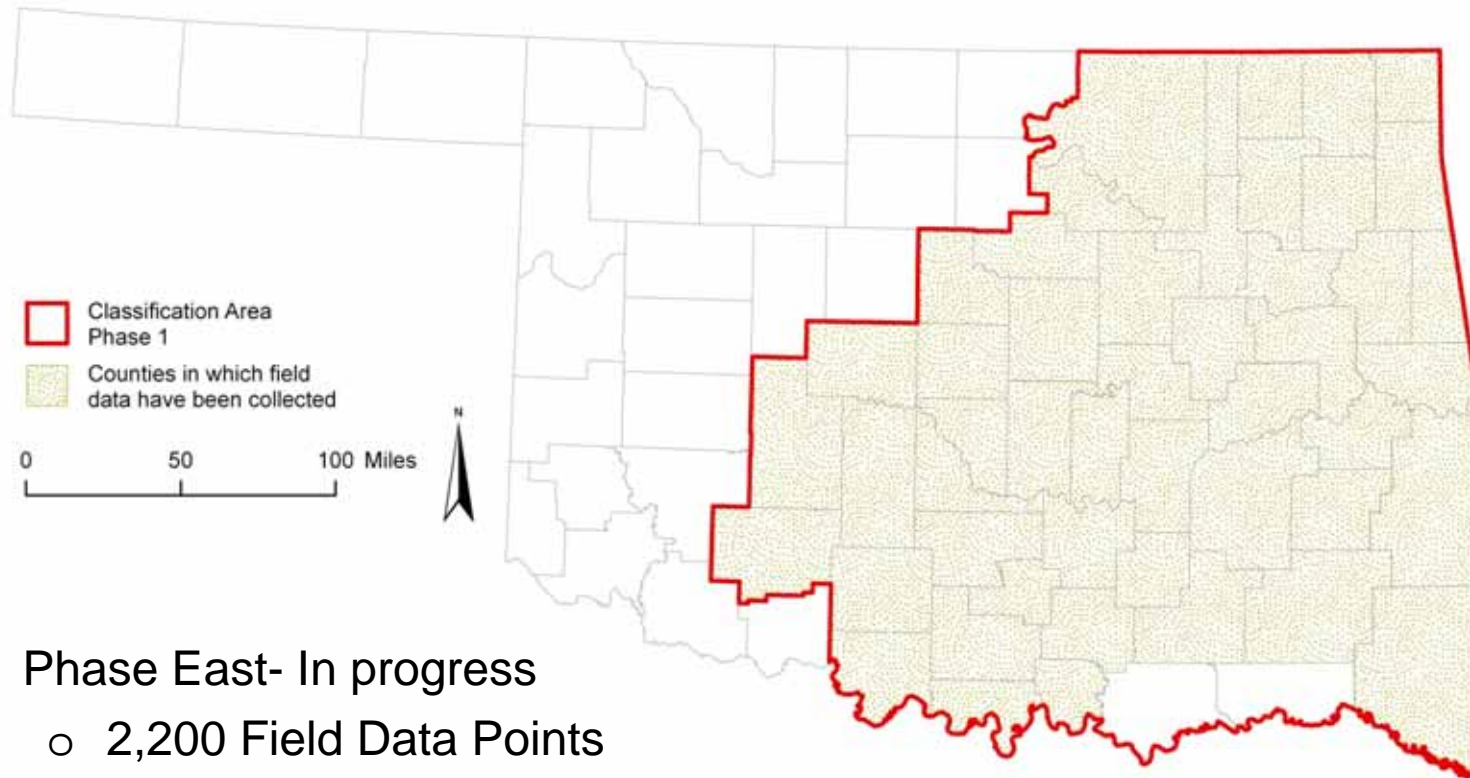


Ozark-Ouachita Shortleaf
Pine-Oak Forest



Orchard (Pecan)

Field Data Progress



- Phase East- In progress
 - 2,200 Field Data Points
 - 40 Ecological Systems
 - 10,000 miles driven

Progress from the MoRAP Group

- Gathered soils, DEMs, Geology, air photos, and other layers for mapping
- Acquired and mosaicked Landsat TM satellite imagery
- Gather Forest Inventory & Analysis (FIA) data for Oklahoma
- Draft image objects from air photos completed

Improvements Over Existing Maps

- Increased thematic resolution (about 20x more mapped types than NLCD)
- Increased spatial resolution (30 m to 10 m resolution)
- Greater use of ground-based data (over 2,000 data points already)
- Nationally-recognized classification system; adheres to relevant FGDC standards
- Seamless coverage across state boundaries