

COLLABORATION IS THE KEY TO SOLUTIONS

Collaborations between UMESC, Earth Resources Observation Systems Data Center (EDC), and the Patuxent Wildlife Research Center have led to:

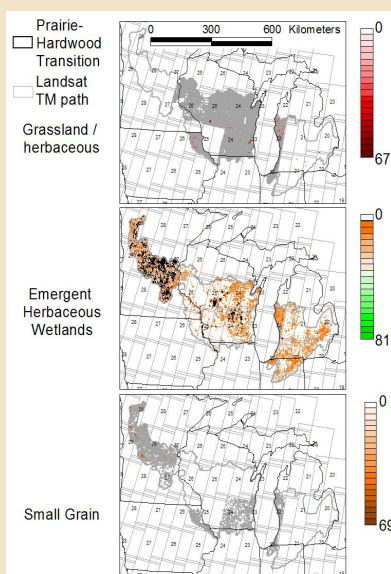
- advancements in the statistical approach to predicting avian counts over space
- models and maps of rare and imperiled bird species,
- decision support system tools for land managers,

- identification of discrepancies in the National Land Cover Dataset 1992

- preliminary research on modeling wetness and wetland probability over large regions, and

- proposed research for mapping landscape fragmentation across the conterminous US using advanced computing solutions.

An example of the collaboration between USGS Centers

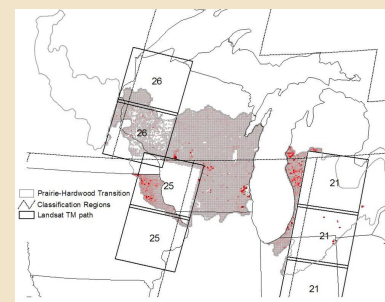


Land cover-specific mapping inconsistencies for the upper Midwestern U.S.

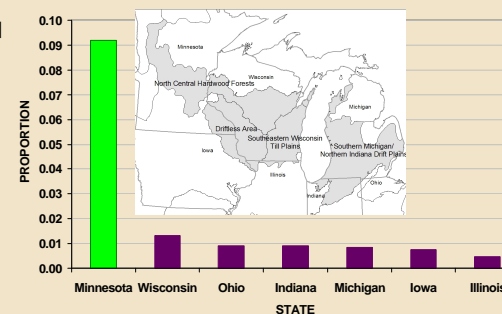
To overcome mapping-related challenges associated with representing predicted avian abundance, UMESC and EDC identified patterns in grassland/herbaceous, emergent herbaceous wetlands, small grain, and urban grass land covers in the National Land Cover Dataset 1992 influenced by inconsistencies in the classification of Landsat Thematic Mapper (TM) imagery (Left Figure).

We observed obvious classification seams in the land covers that are coincident with the TM paths. For instance, no grassland/herbaceous land cover was mapped west of TM path 27 and east of TM path 22 in the Prairie-Hardwood Transition (Right Figure). Grassland/ herbaceous, emergent herbaceous wetlands, and small grain land covers all exhibit seams along the west edge of TM path 21.

Additional problems exist related to differences among states (see Figure below). Also, grassland/herbaceous and small grain were mapped in the Driftless Area of northeastern Iowa but not in the adjacent Driftless Areas across the state border.



Errors in mapping generally occur at the boundary of states and mapping regions.



Emergent herbaceous wetland mapped at 7 times the density for Minnesota compared to other states in the region.