

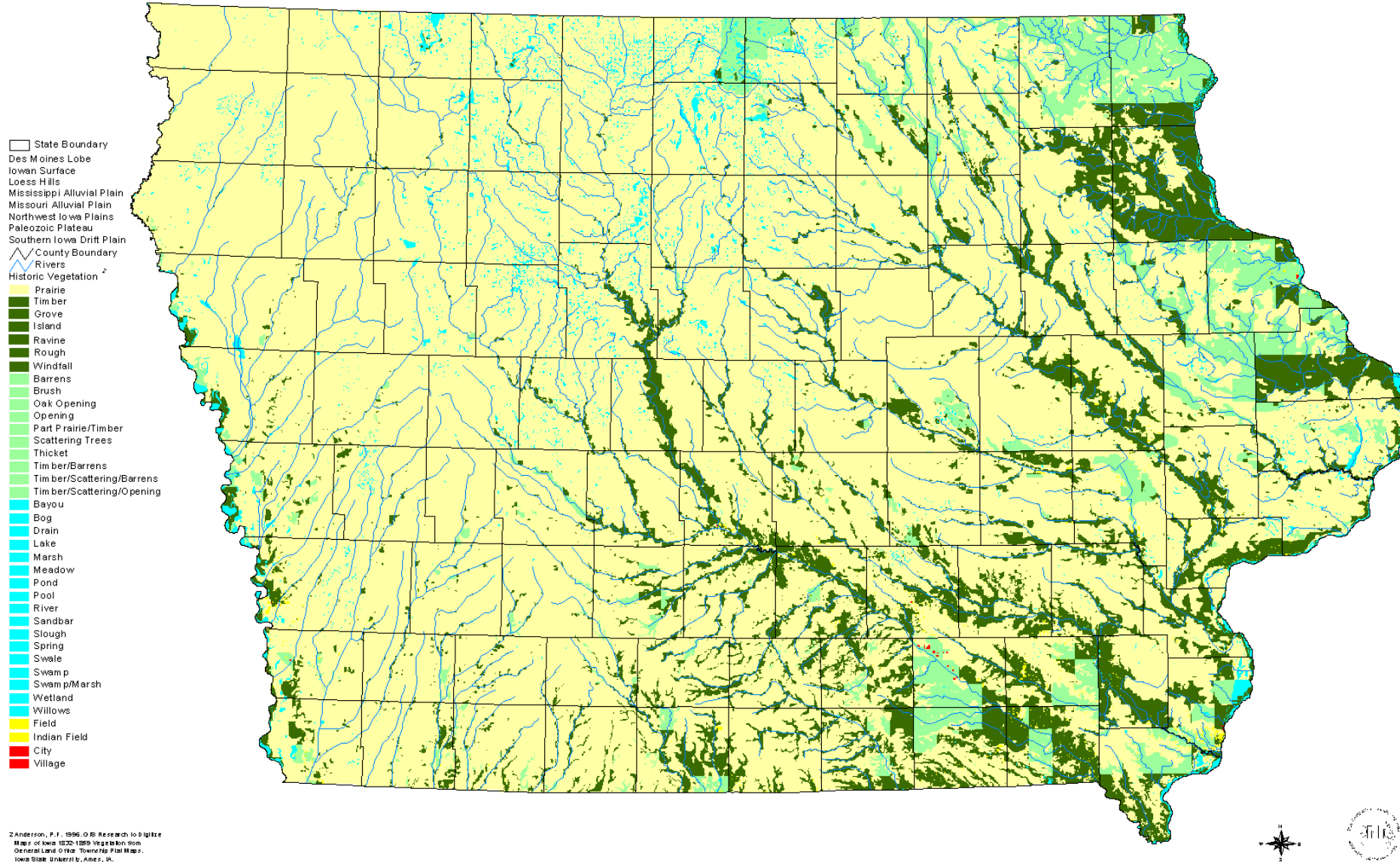
Southern Iowa Oak Savanna Restoration Initiative



Gregg Pattison, USFWS

GLO Land Survey Records 1832-1859

Historic Vegetation of Iowa, 1832 - 1859



Native American Use of Fire

- “It is a common practice among Indians and other hunters to set the woods and prairies on fire.”
(Stoddard 1812)
- “In the regions where the Indians are in control, prairies and forests are set on fire.” *(Duden 1829)*
- “The secret of the openings lies in the annual conflagrations which pass over all the prairies and barrens in the west.” *(Jones 1838)*

"In the timbered portions of the county, there was absolutely no brush. The trees were very massive and the ground underneath covered with prairie grass. The massive trees, the prairie flowers and grass all combined to make this a truly beautiful and inviting country."

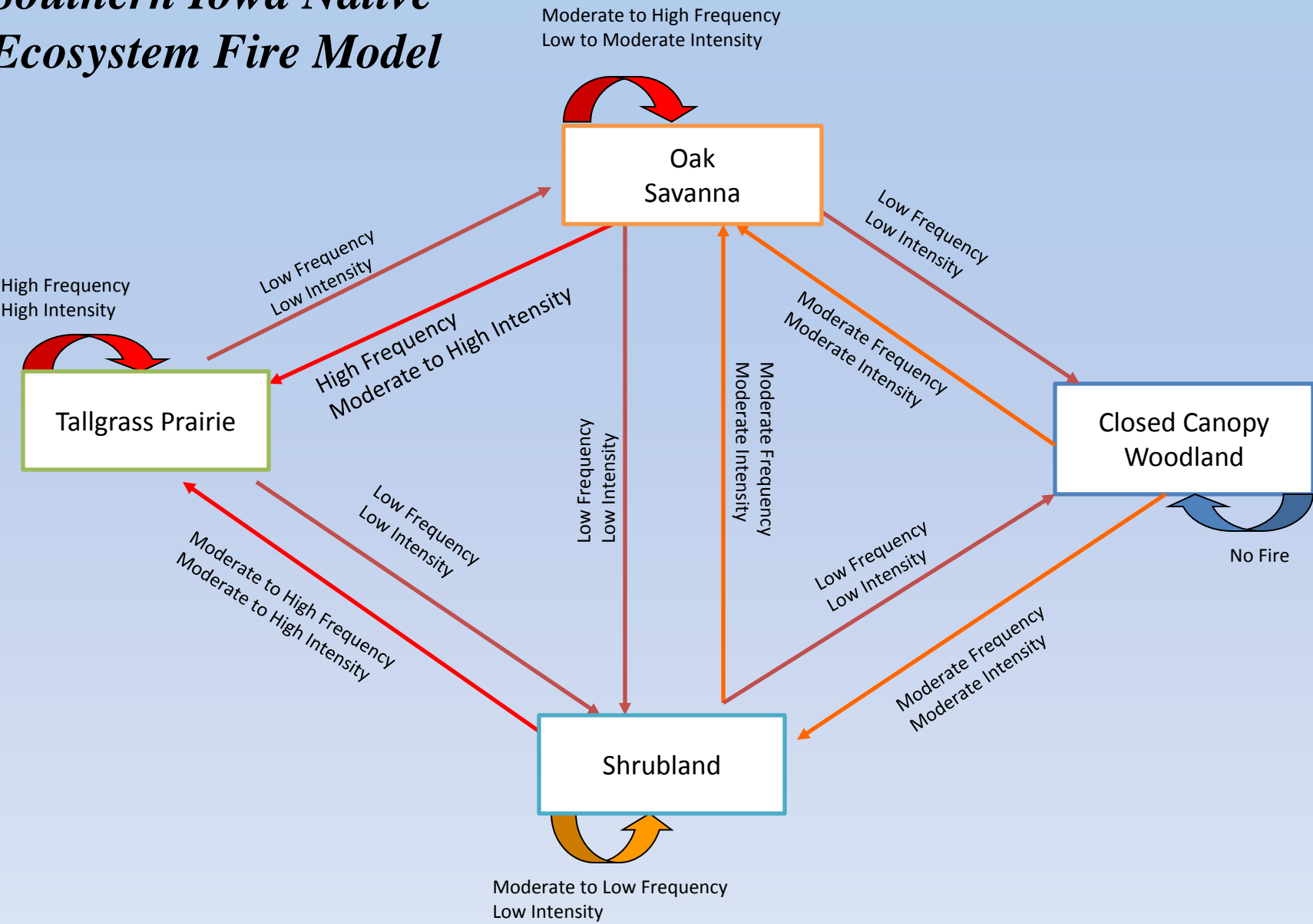
-Thomas Dockery, 1855, Adair Co. Missouri

"When the county was first settled there was no underbrush or small timber such as now exists. The timbered lands were open, the trees standing so far apart that hunters could see the deer at distances from one to five hundred yards. The entire surface of the country was then covered with a rank growth of vegetation, consisting of native grasses and wild flowers, which gave the landscape, especially the timbered lands, a much more beautiful appearance than it now has."

-Joseph Mudd, Lincoln Co. Missouri, 1888.



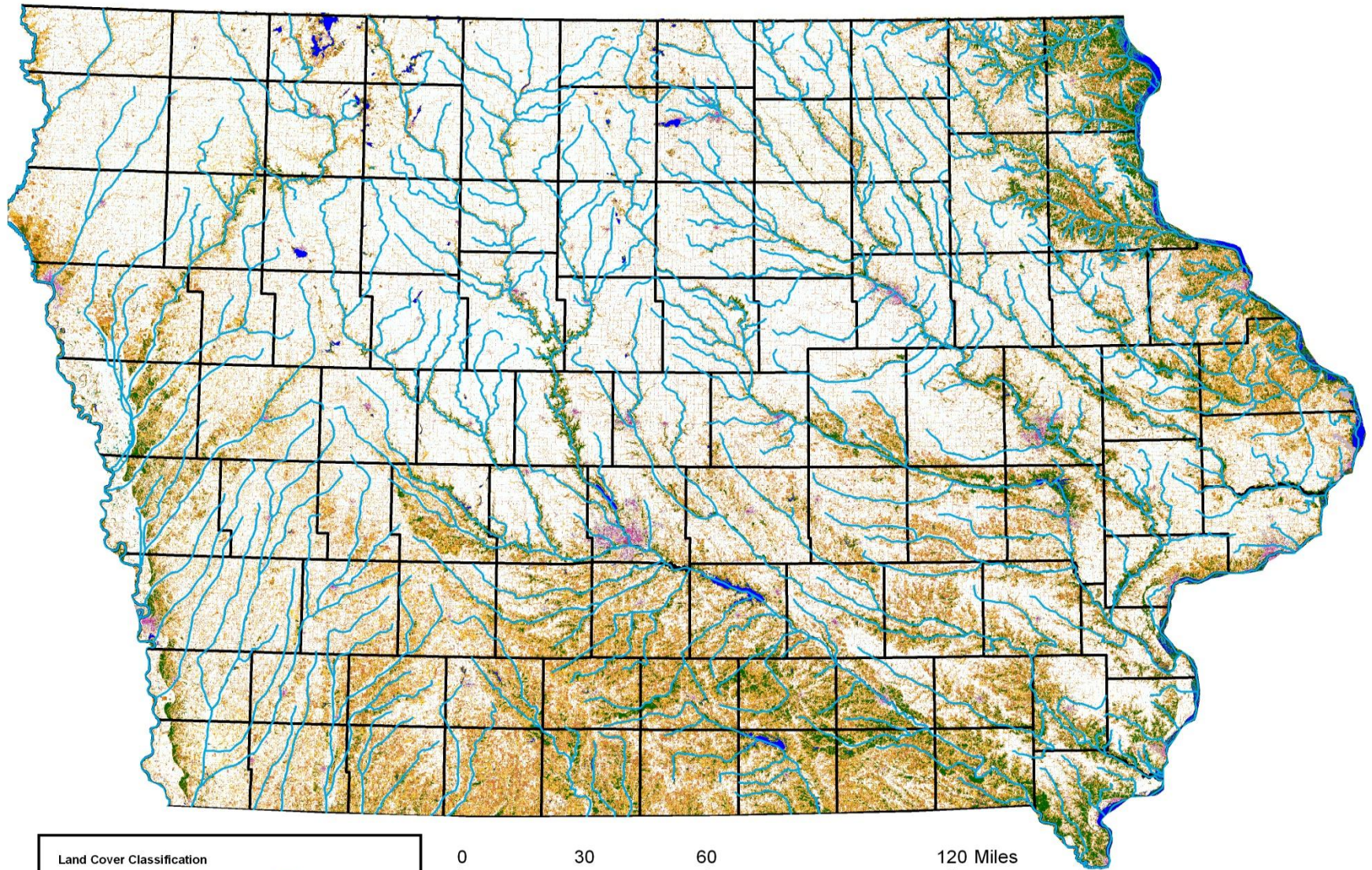
Southern Iowa Native Ecosystem Fire Model



160 Years of Development



State of Iowa Landcover 2002



Land Cover Classification

county	ungrazed grassland	roads
unclassified	grazed grassland	commercial industrial
water	CRP grassland	residential
wetland	alfalfa	barren
bottomland forest	corn	clouds / shadow / no data
coniferous forest	soybeans	major_rivers
deciduous forest	other rowcrop	

0 30 60 120 Miles



Land Use of Southern Iowa

10 County Priority Area

<i>Land Use</i>	<i>Acreage</i>	<i>Percent of Total Area</i>
Pasture/Woodlands	1,068,256	35%
Row Crop	921,700	30.2%
CRP	412,042	13.5%
Hay	363,207	11.9%
Other Use	152,608	5.0%
Public Land	85,460	2.8%
Towns/Urban	48,835	1.6%
TOTAL	3,052,160	100%



Timberhill Savanna

Long Memory of the Land

- Bill and Sibylla Brown
- Historical Documentation
- Restoration begins 1993
- Thinned and burned the woodlands
- Savanna structure restored
- Plants and wildlife given a chance to thrive
- Hydrology restored



Species List to date:

500+ vascular plants (>92% native)

74 bird species

80 fungi species

40+ ant species



Partners for Fish and Wildlife Program

Working together to restore habitat

Southern Iowa Oak Savanna Initiative

Landowners

Decatur County Conservation Board

Graceland University

Private Contractors

Iowa DNR

USFWS

NRCS

National Wild Turkey Federation

TNC

Iowa State University NREM

Southern Iowa and Iowa River Valley RC&D

Volunteer Fire Departments

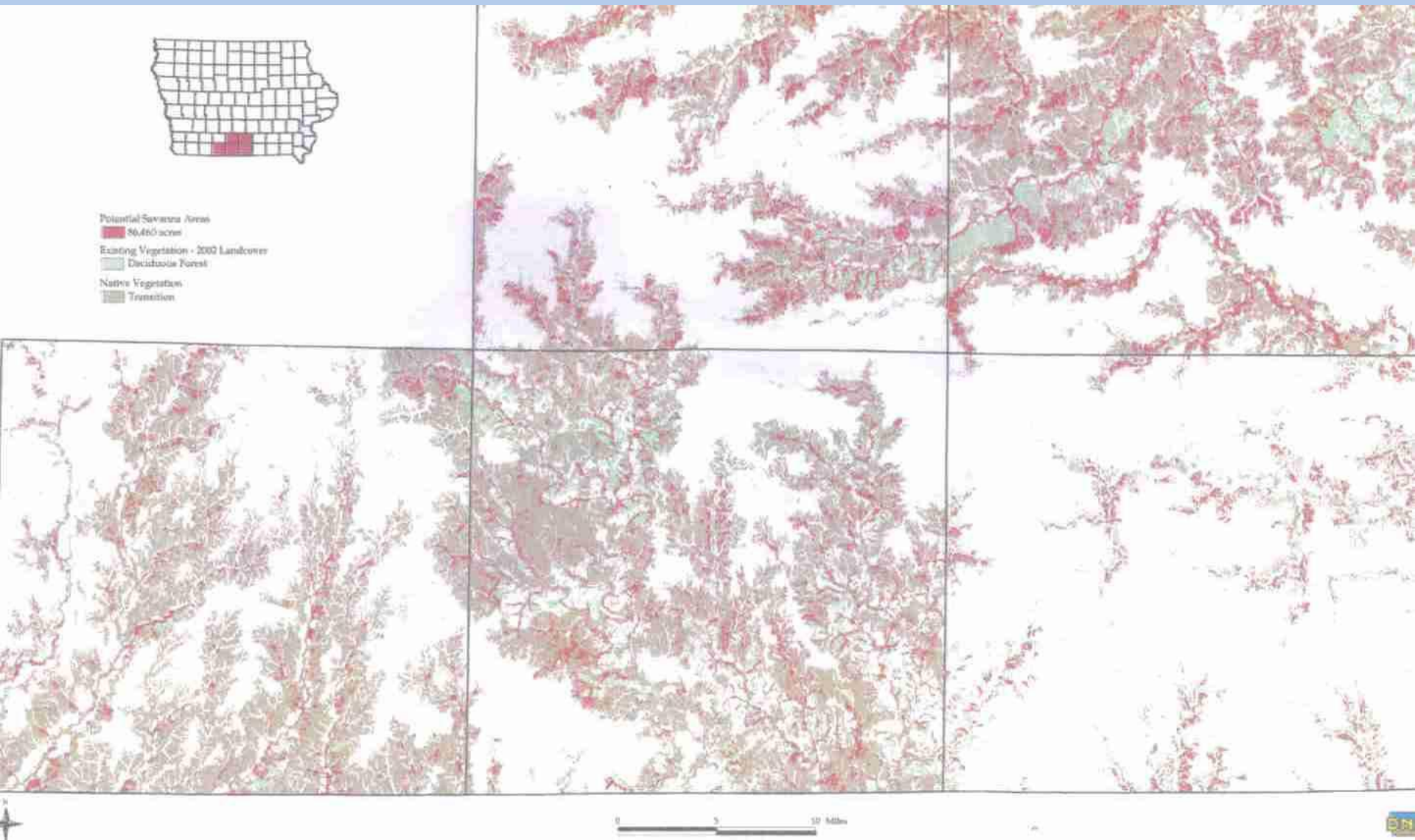
Clarke, Wapello, Ringgold, Taylor, Mahaska, Lucas,

Madison and Union CCBs



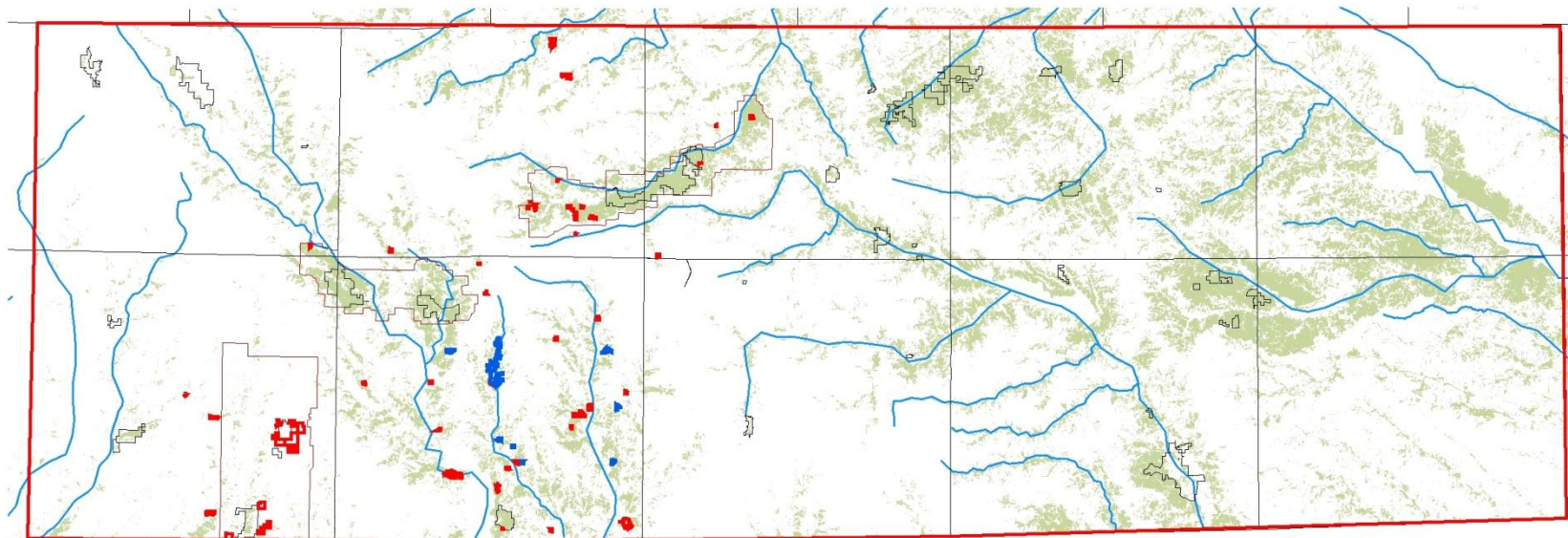


Oak Savanna Habitat



Southern Iowa Oak Savanna Alliance

High Priority Restoration and Outreach Range







Annual Burning in Oak Savanna

- Burn during the dormant season
- Reduce brush and litter
- Frequent Low Intensity Fires
- Encourage natives
- Improve hydrology and soil tilth



Strategies for Fire Implementation

- 1) Private Fire Associations**
- 2) NWCG qualified burn crew – available for wildfire details**
- 3) Continued commitment to burn from DNR, CCB, TNC, Individuals**
- 4) Contracted Burn Crew**
- 5) Recreational Landowner/
Cattle Producer Partnerships**
- 1) Educational Programs and
Workshops for Landowners**



Getting Fire on the Ground

How to Increase Fire Use

- Equipment
- Training
- Teamwork

















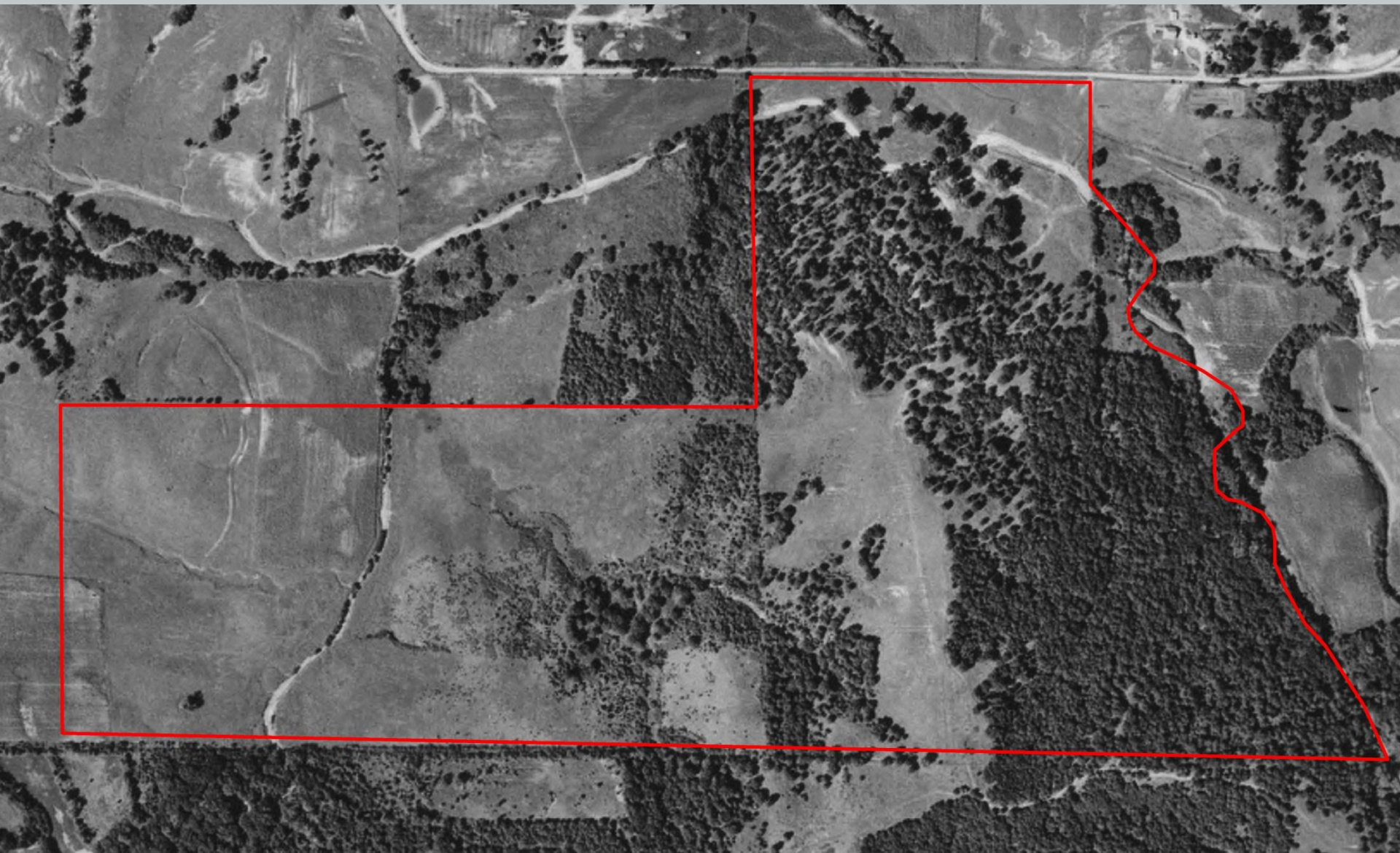








Timberhill Savanna – 1950s aerial mosaic



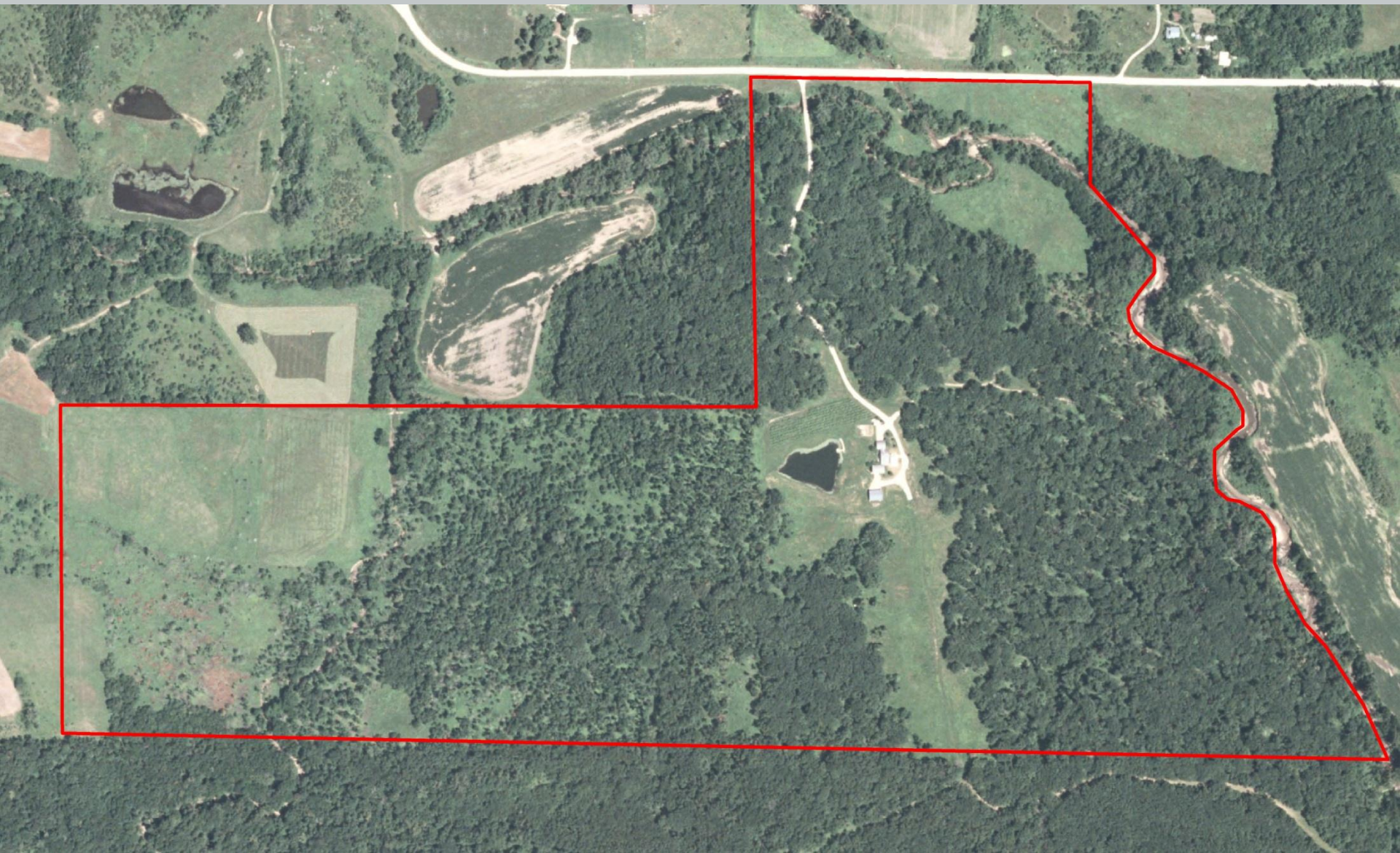
Timberhill Savanna – 1990s aerial photo



Timberhill Savanna – 2004 NAIP photo



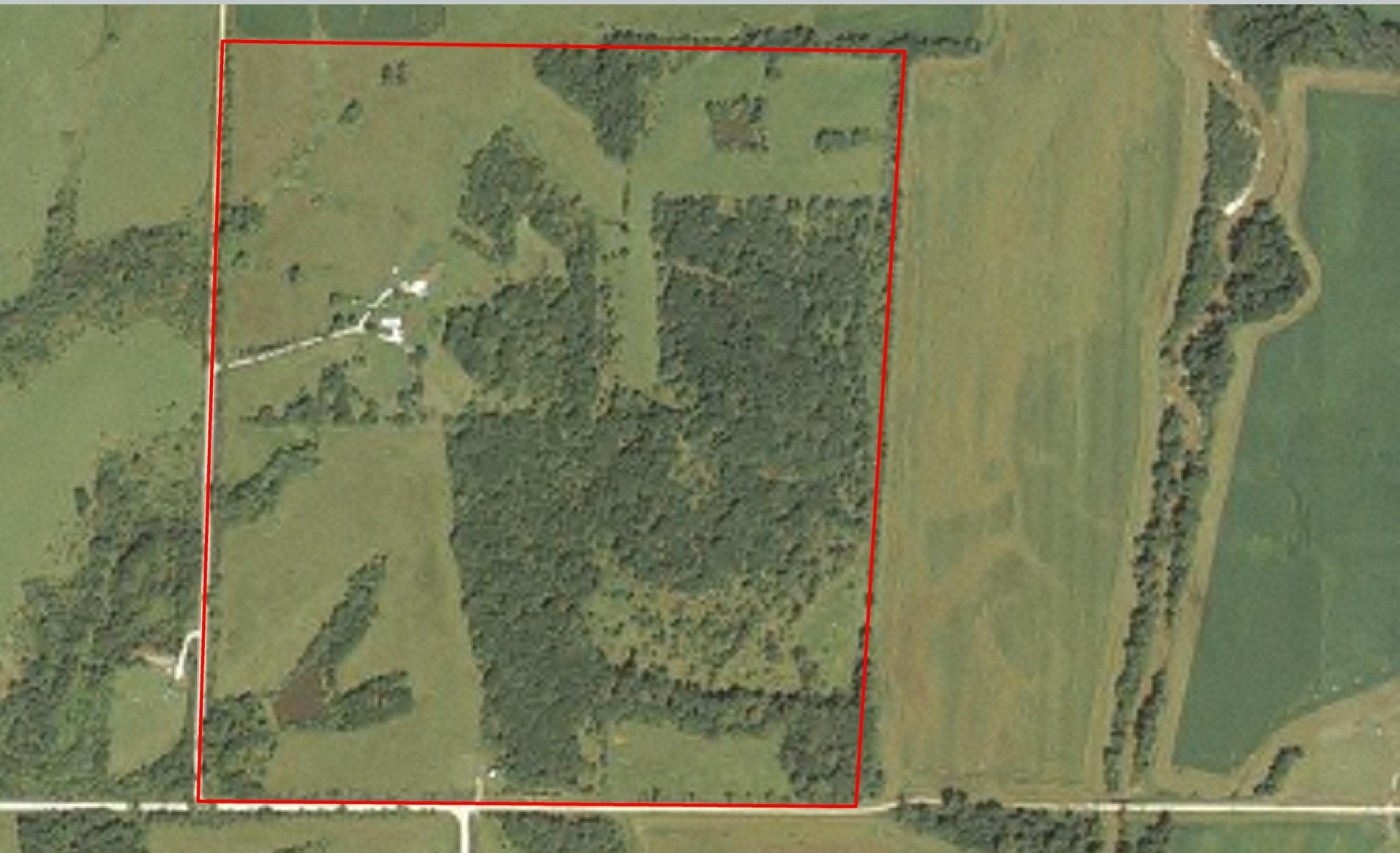
Timberhill Savanna – 2008 NAIP photo



Hillyard Savanna – 1950s aerial photo



Hillyard Savanna – 2004 NAIP photo



Hillyard Savanna – 2008 NAIP photo



Ecological Threats and

Management Challenges

- 1) Invasive Species
- 2) Hands-Off Management – Deer Strategy
- 3) Status Quo – not increasing the use of fire
- 4) Development/Fragmentation
- 5) Bio-fuel industry
- 6) Southern Iowa Economy

Southern Iowa Land Management Changes

- Remains primarily Cattle Country
- (1900-1980s) Row-Crop Ag – 46,800+ acres CRP in Decatur County
- Absentee Landlords
- Retiree/Recreation
- Deer Hunters
- Decatur Population
 - 1900: 18,155
 - 2012: 8,284



“New Desired State”

- Private Land Management Pressures
 - Hunting
 - Cattle Grazing
 - Row Crop/Biofuels
 - Wind Energy
 - Biodiversity/Ecological Integrity
 - Migratory Birds/ Endangered Species

Need to find a balance on working landscapes to maximize biodiversity and maintain economically and environmentally viable system











Additional Information

- www.soisa.org
- www.timberhilloaksavanna.com/
- www.prescribedburning.org