

**Geographic
Information Systems**



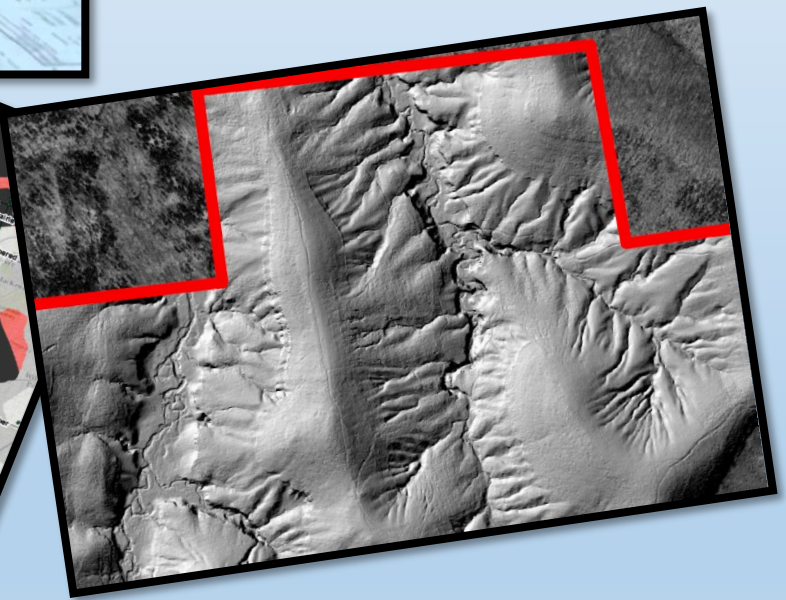
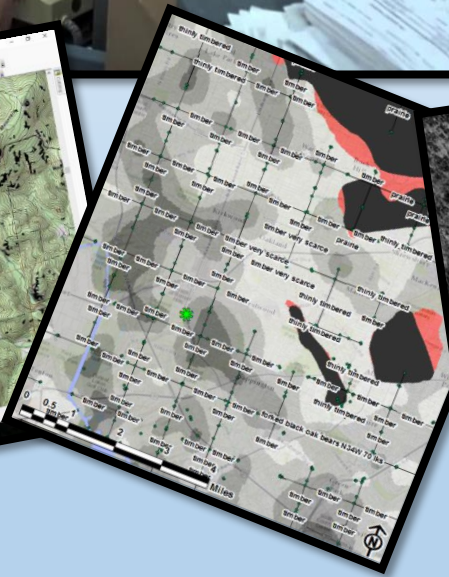
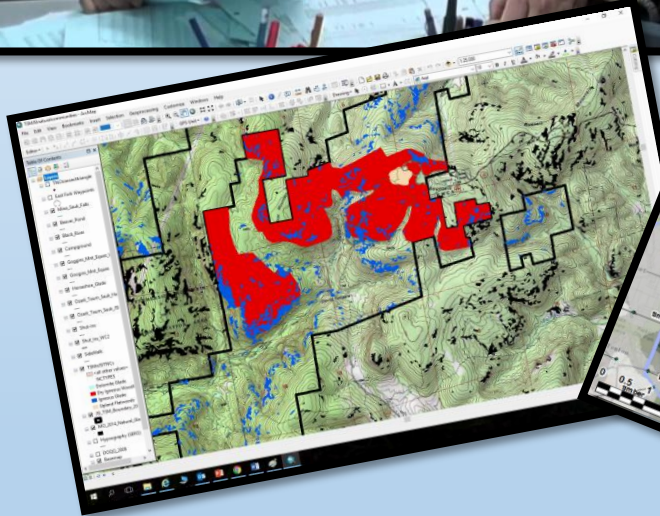
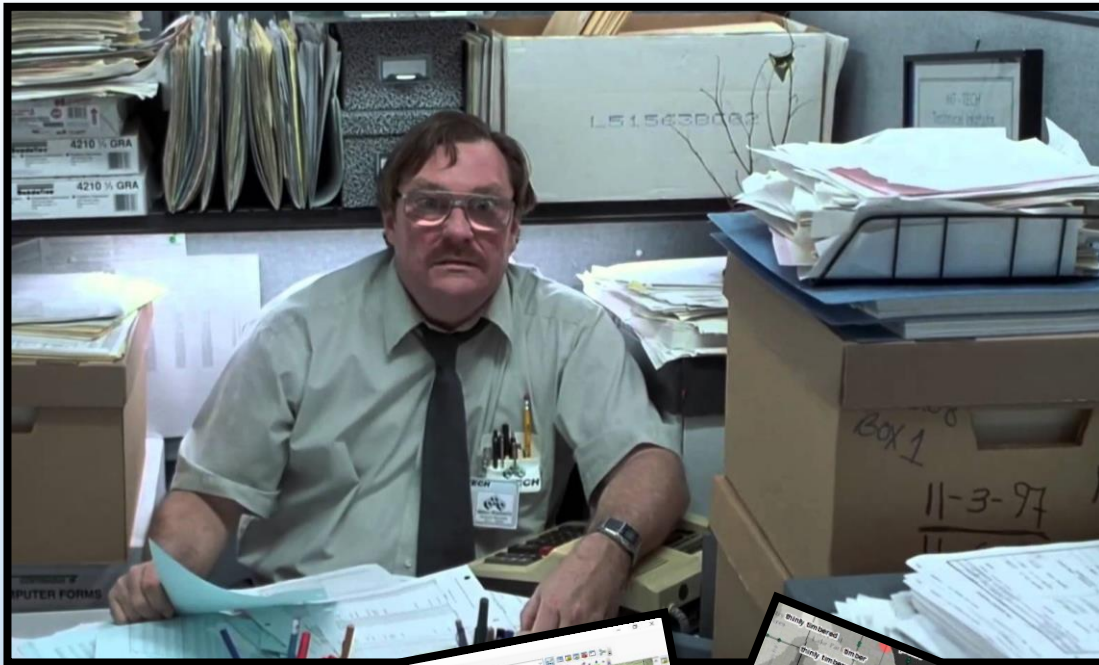
MISSOURI
STATE PARKS

"Preserve and interpret Missouri's natural Landscapes"



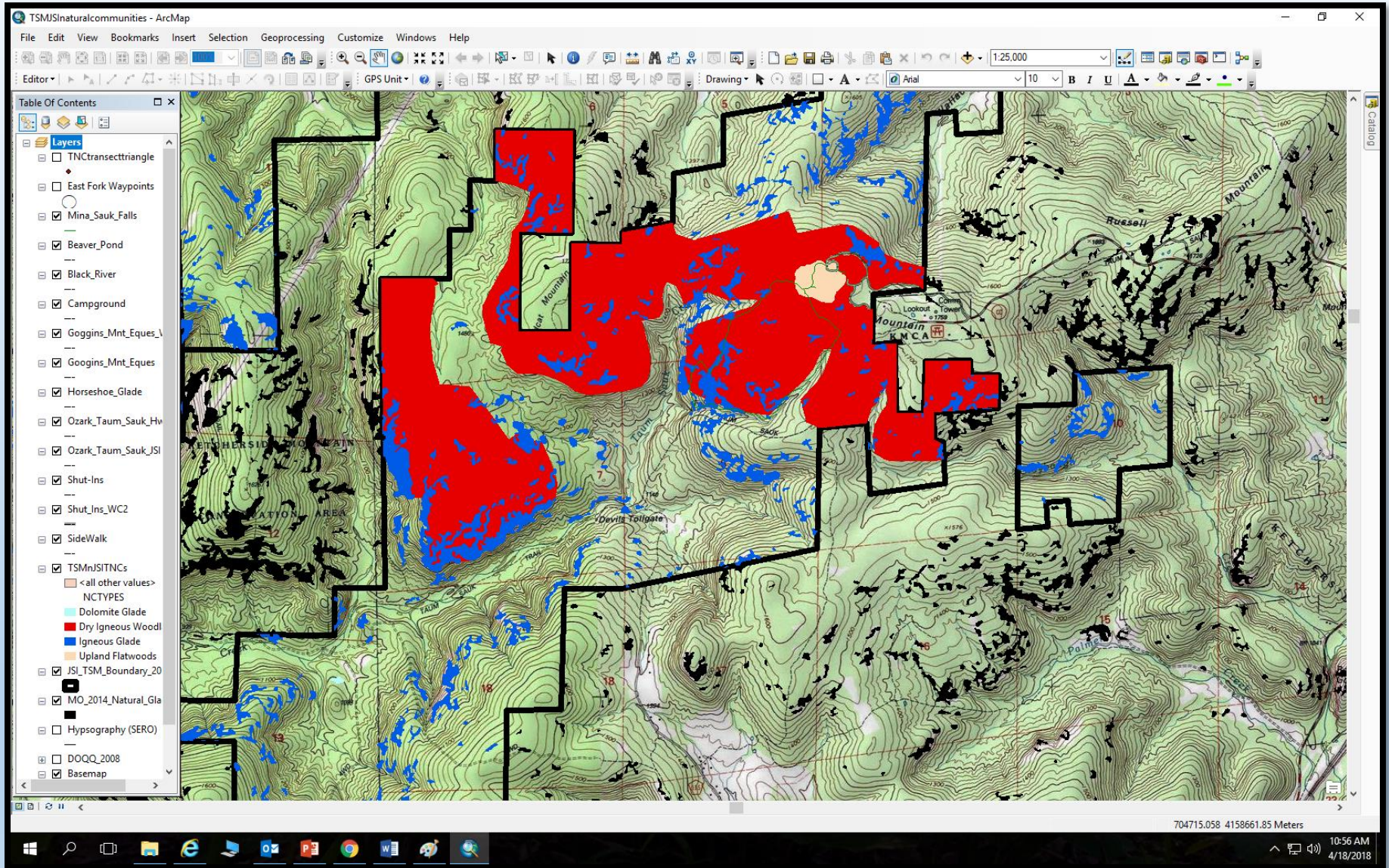
GIS in Parks

- Illustrating park stats
- Mapping ecosystems
- Documenting rare species occurrences
- Research efforts
- Documenting landscape change over time
- Mapping threats
- Demarcating management efforts

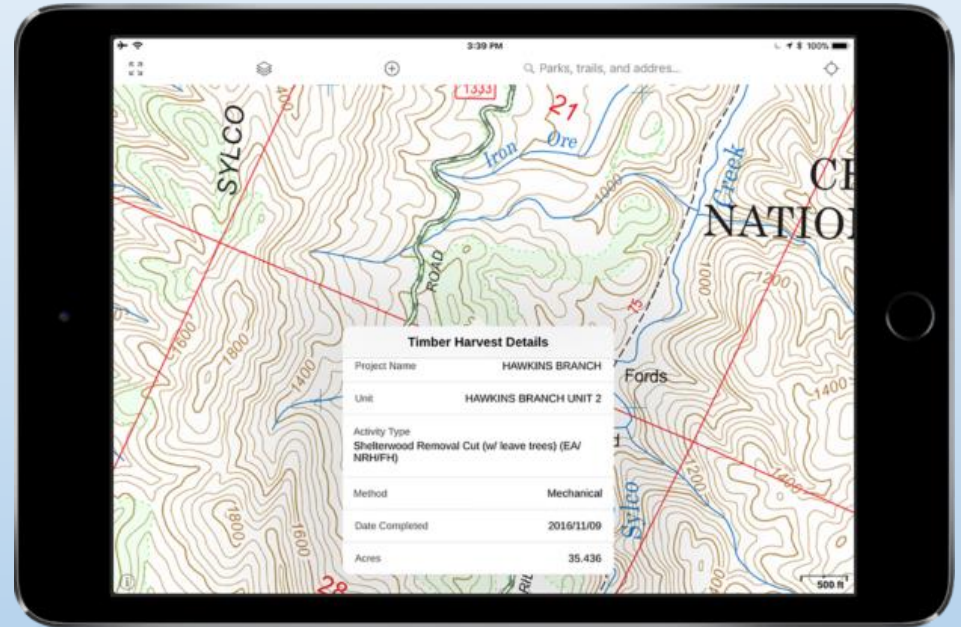


Geographic Information System: Any system designed to capture, store, manipulate, manage and present spatial/geographic data.

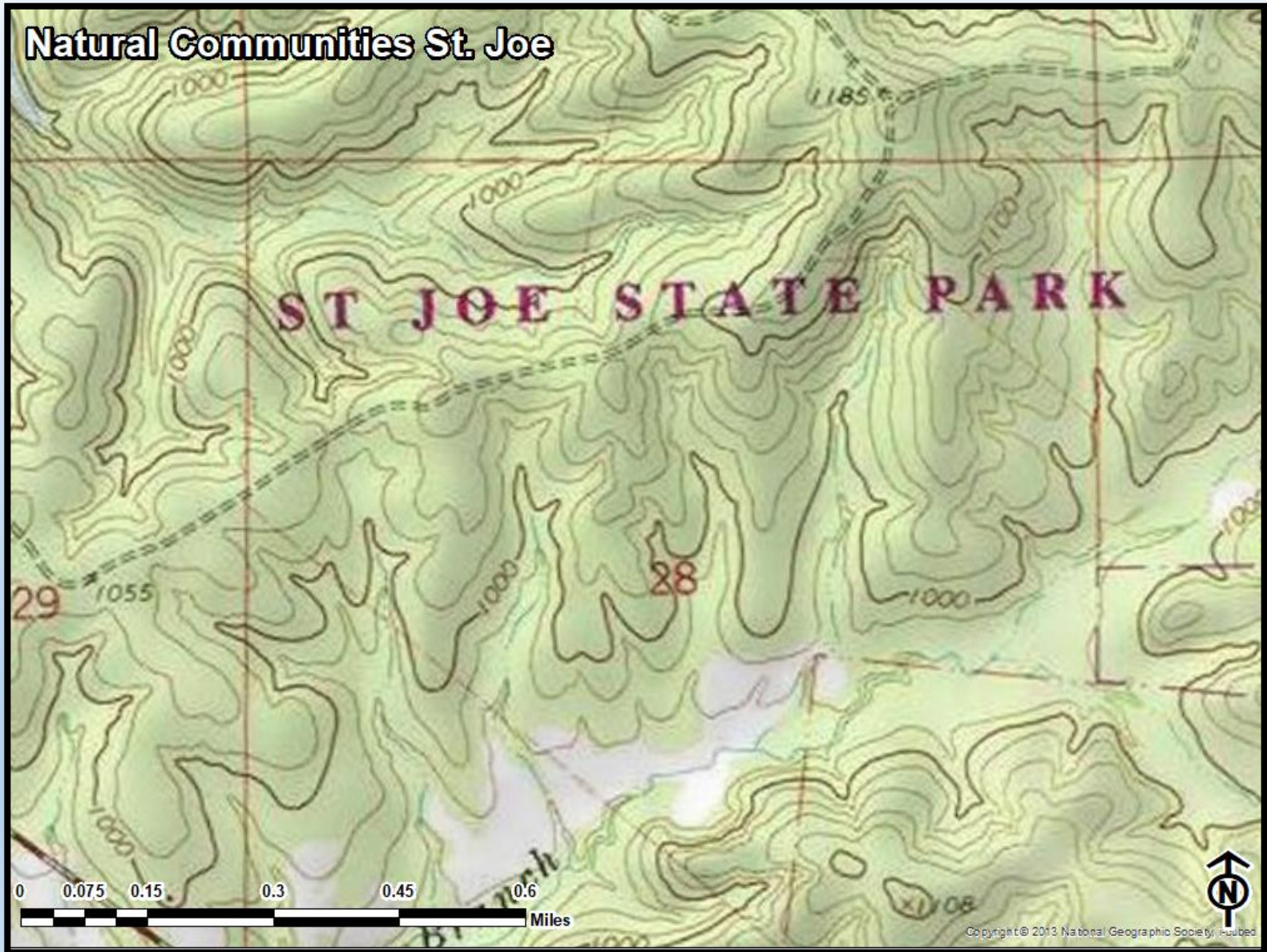
Platforms/Equipment



Platforms/Equipment



Capabilities



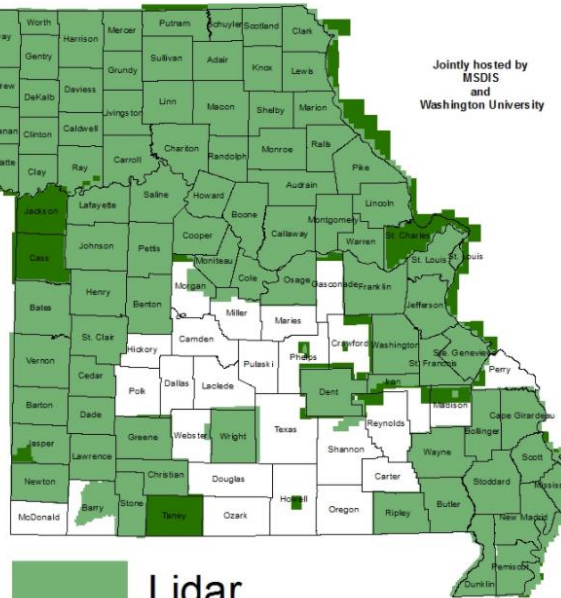
Capabilities



Capabilities

Extents of LiDAR Available For Download
As Of
28 September 2017

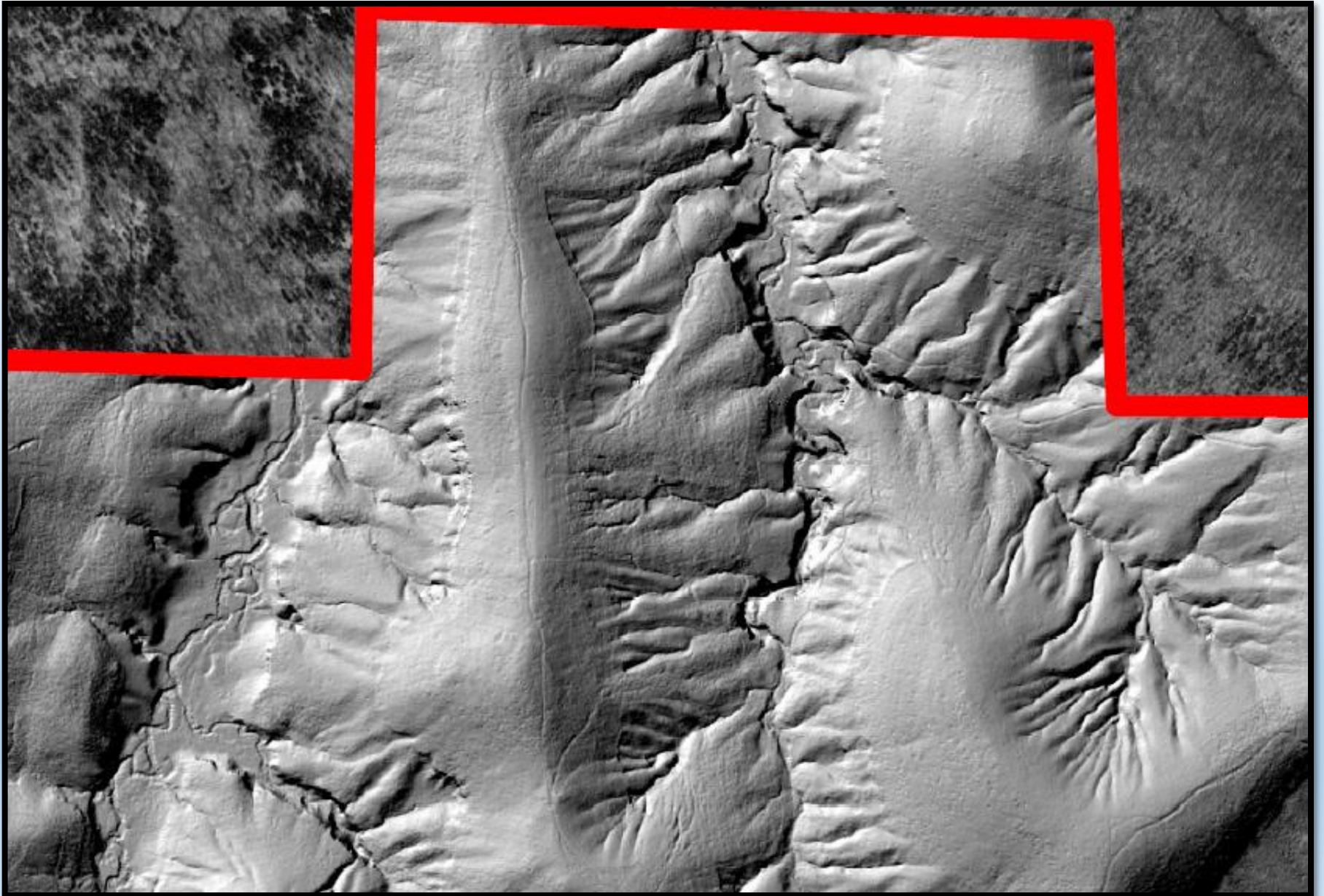
Jointly hosted by
MSDIS
and
Washington University



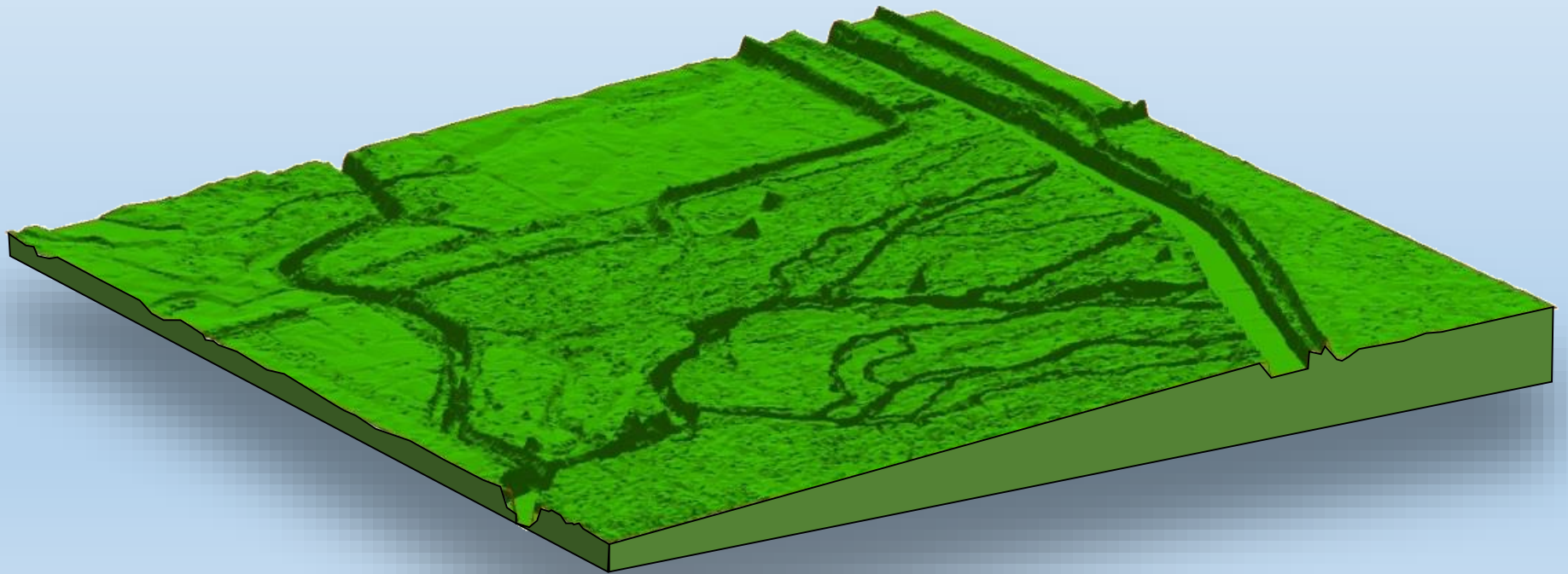
Light Detection and Ranging



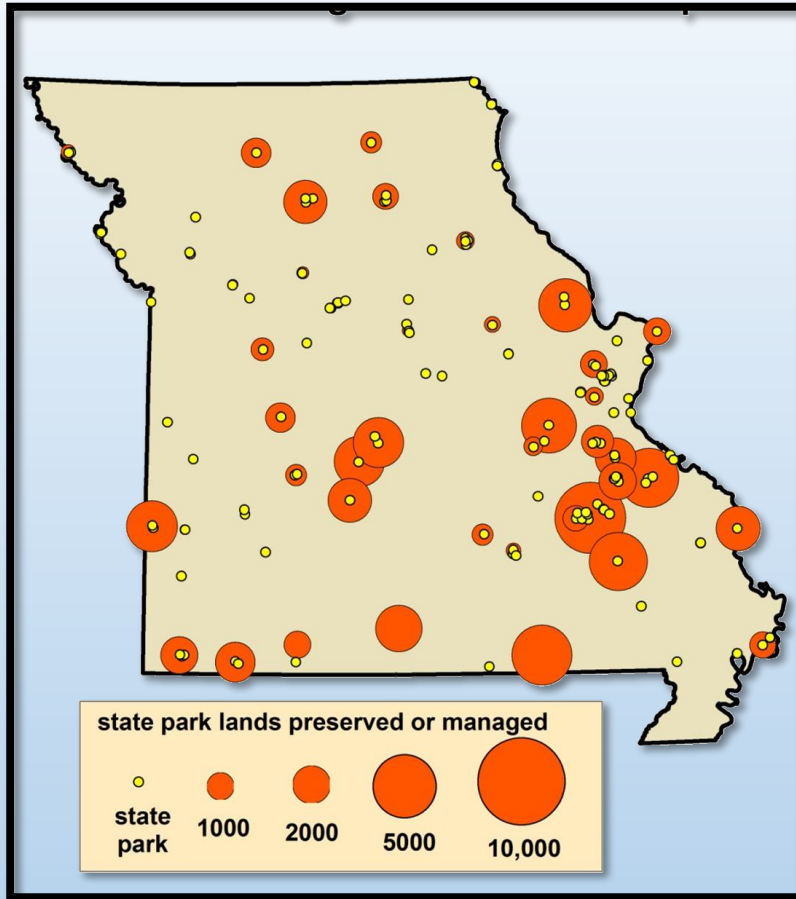
Capabilities



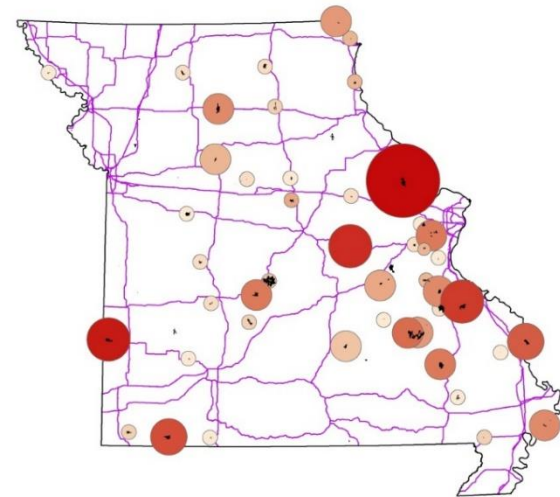
Capabilities



Uses: Illustrating statistics



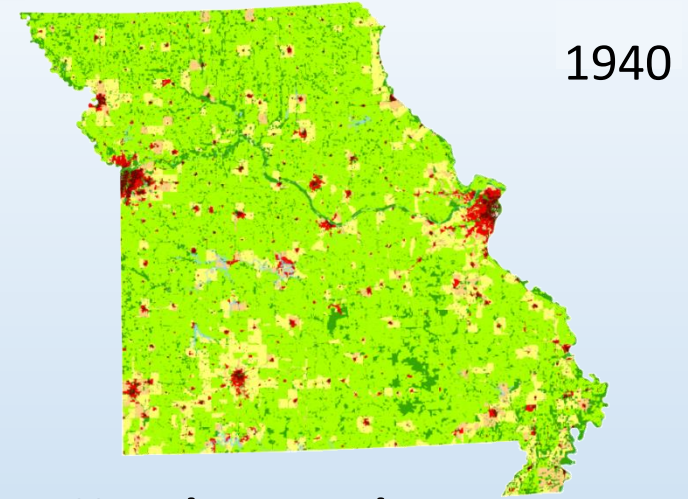
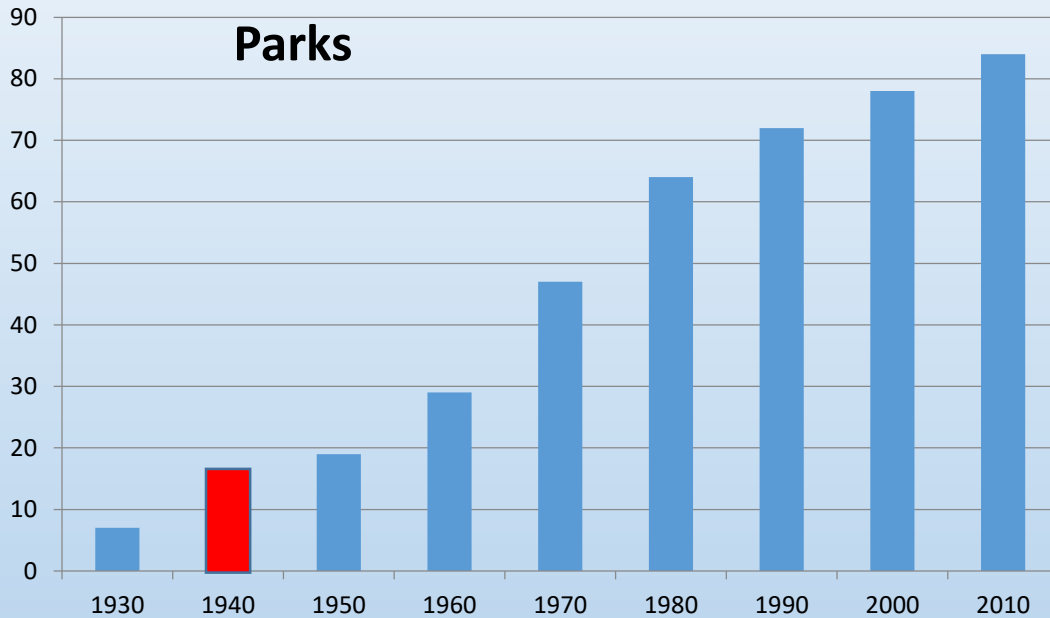
Parks with Rare or Endangered Species



Number of Species of Conservation Concern

Uses: Illustrating statistics

Number of Missouri State Parks

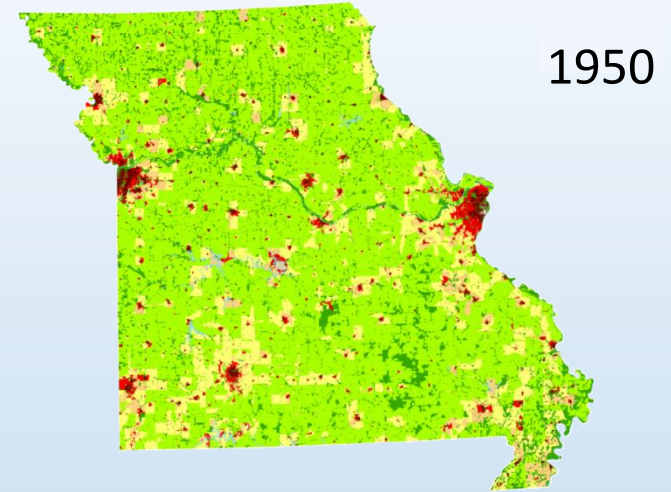
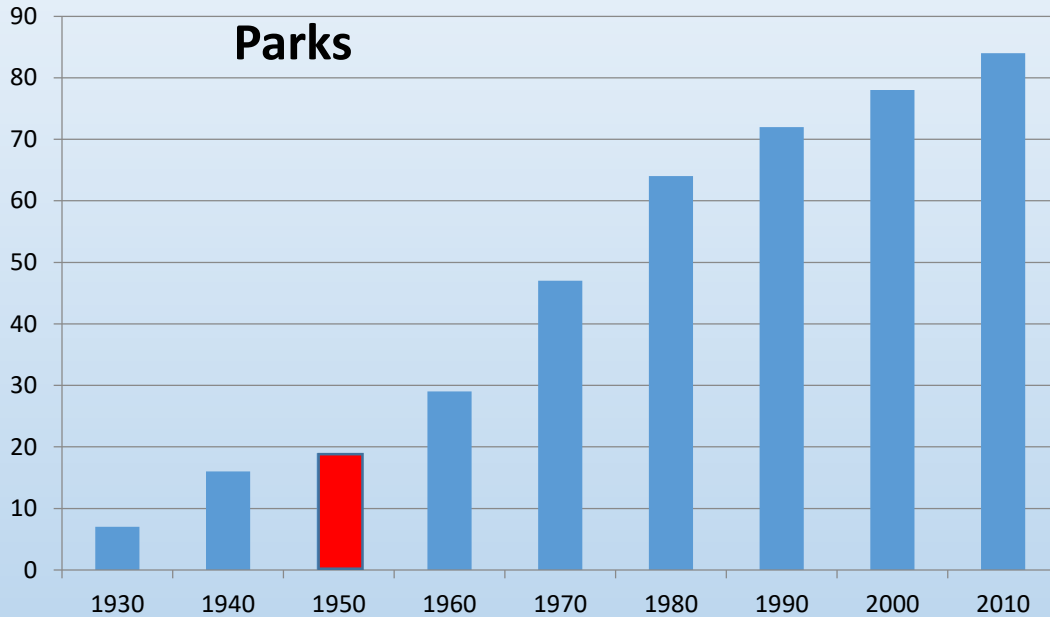


Housing Density



Uses: Illustrating statistics

Number of Missouri State Parks

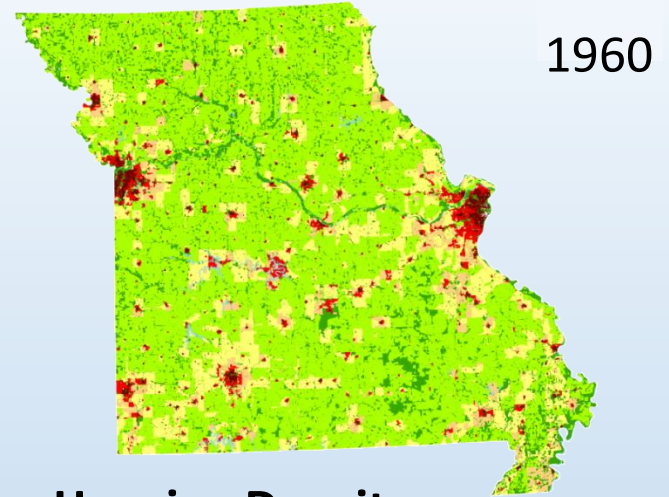
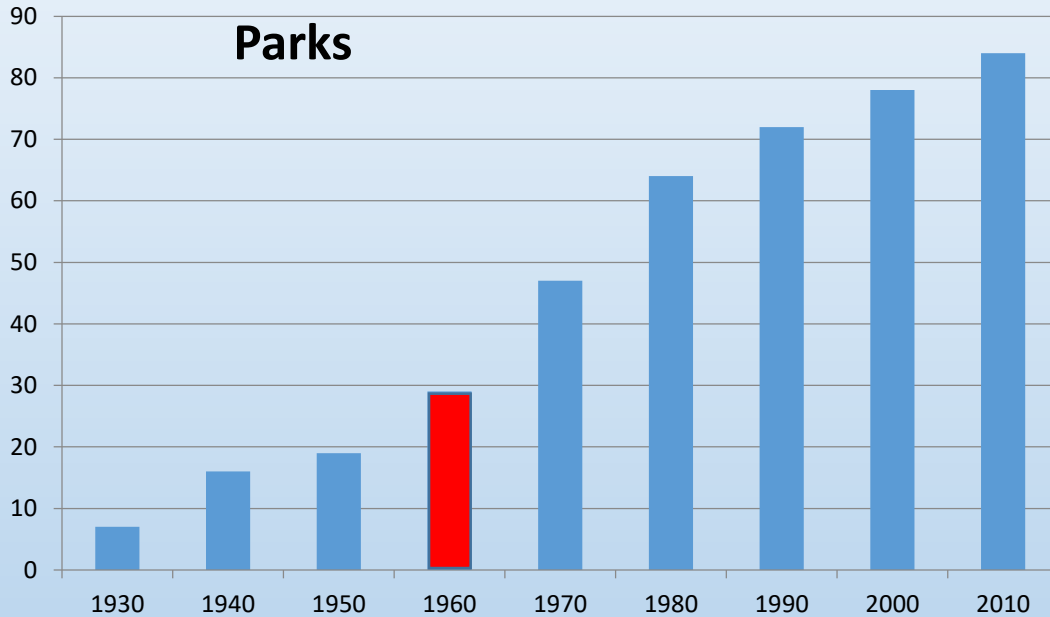


Housing Density



Uses: Illustrating statistics

Number of Missouri State Parks

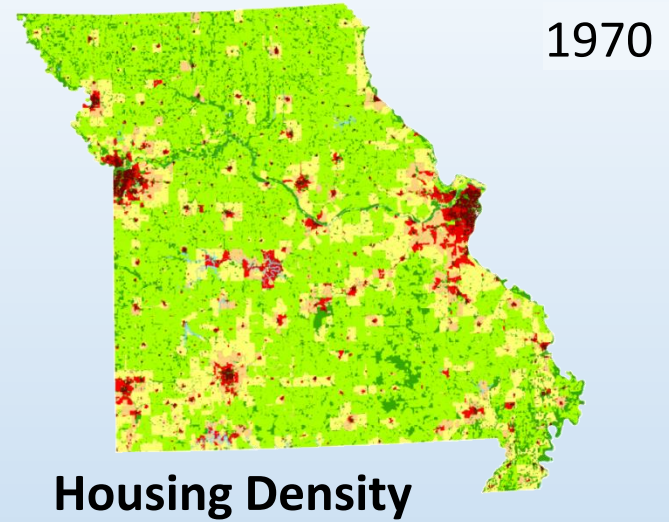
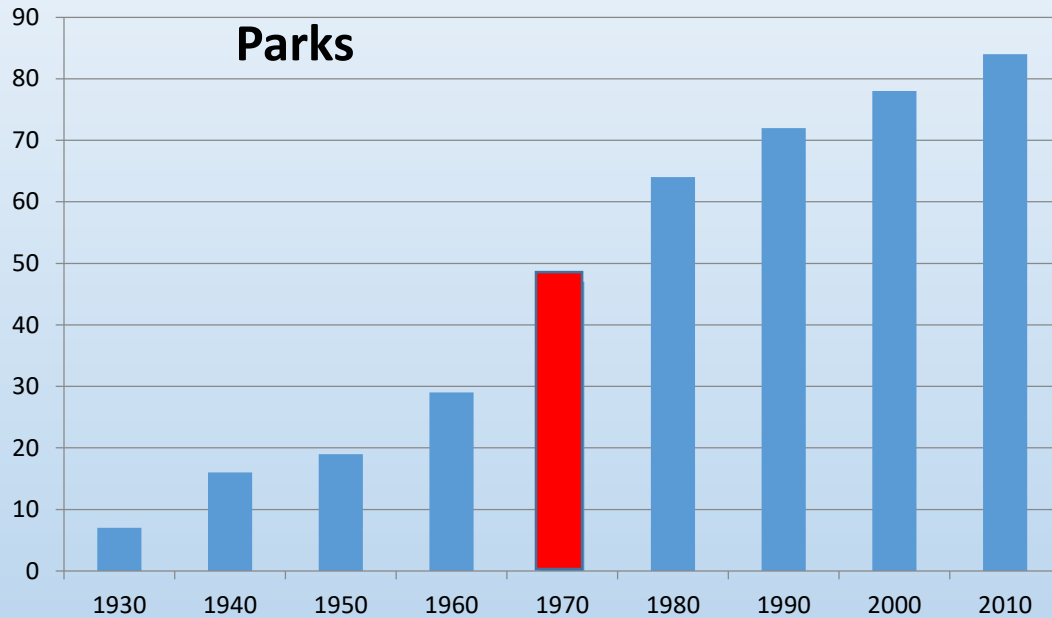


Housing Density



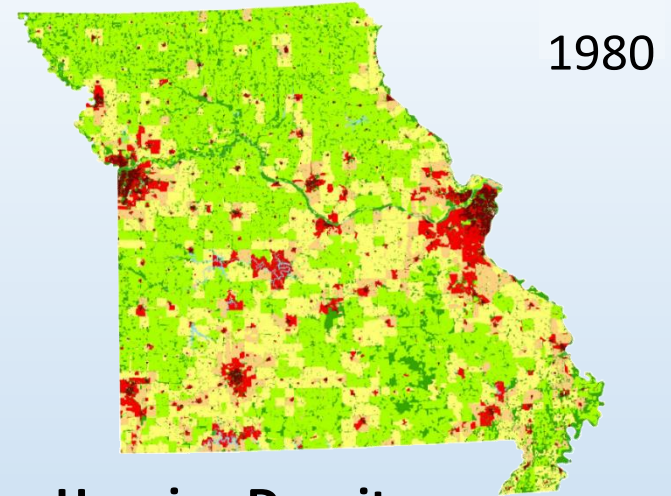
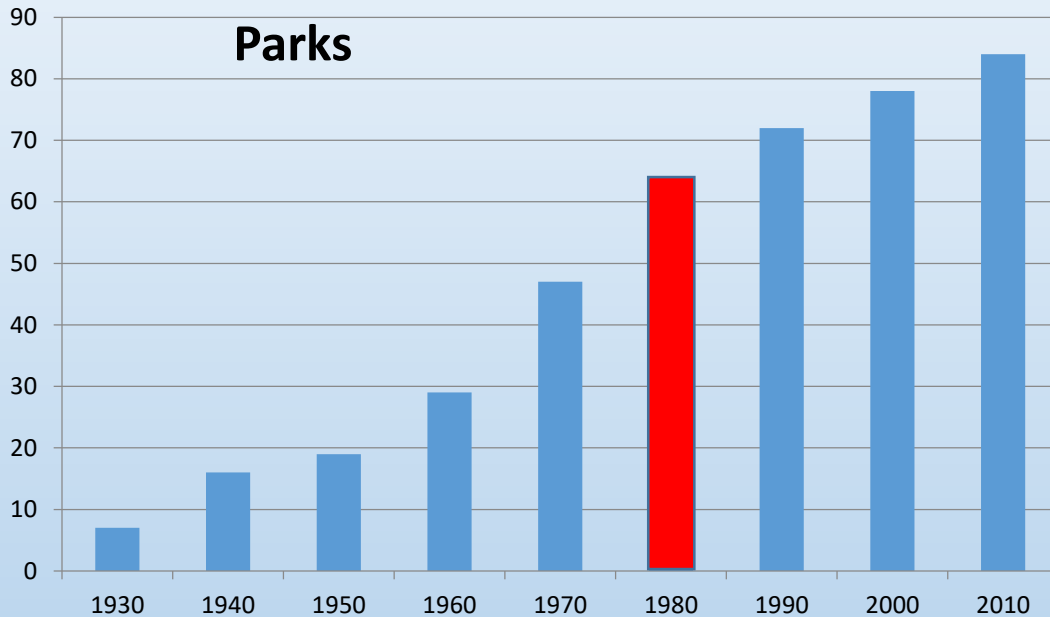
Uses: Illustrating statistics

Number of Missouri State Parks



Uses: Illustrating statistics

Number of Missouri State Parks



Housing Density

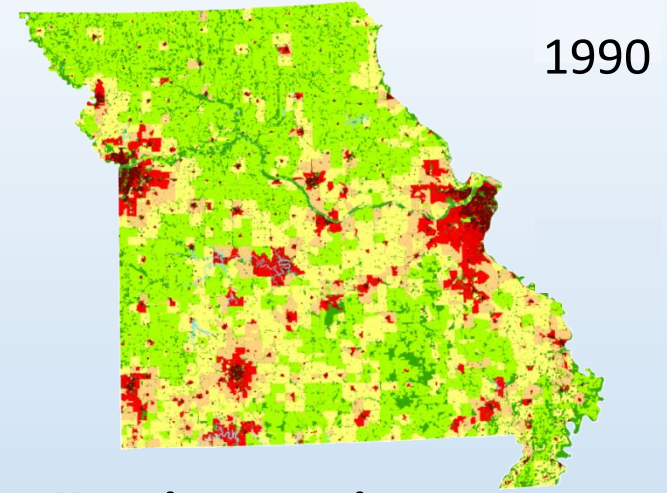
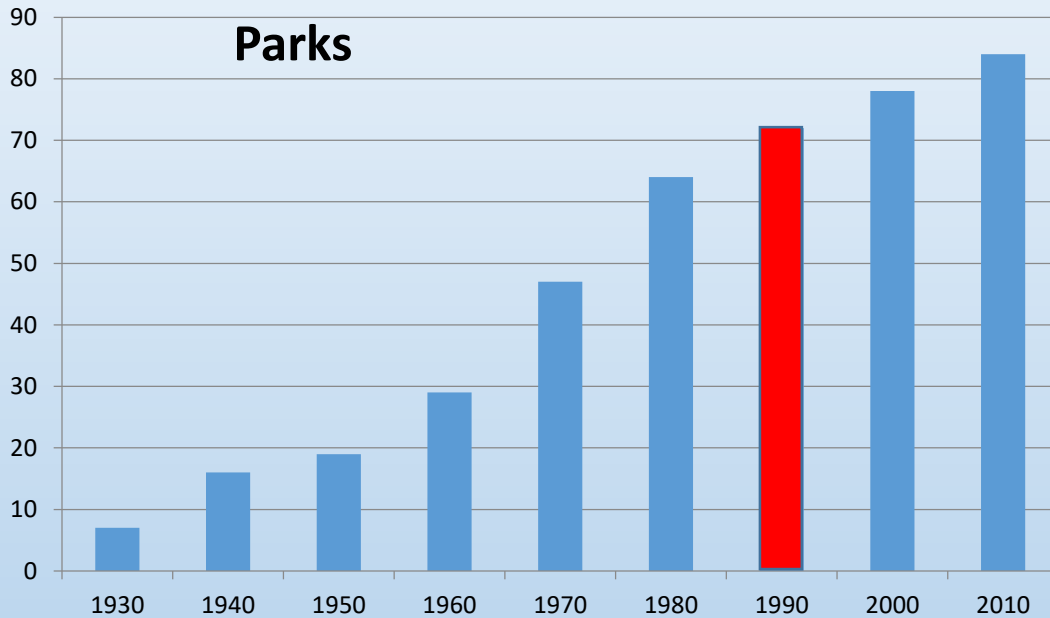



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Uses: Illustrating statistics

Number of Missouri State Parks



Housing Density

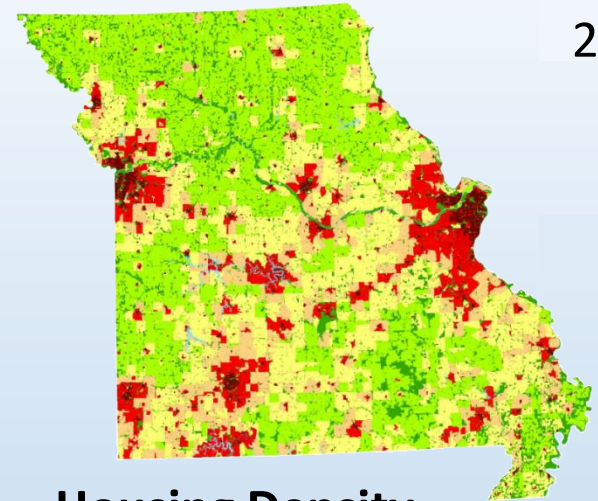
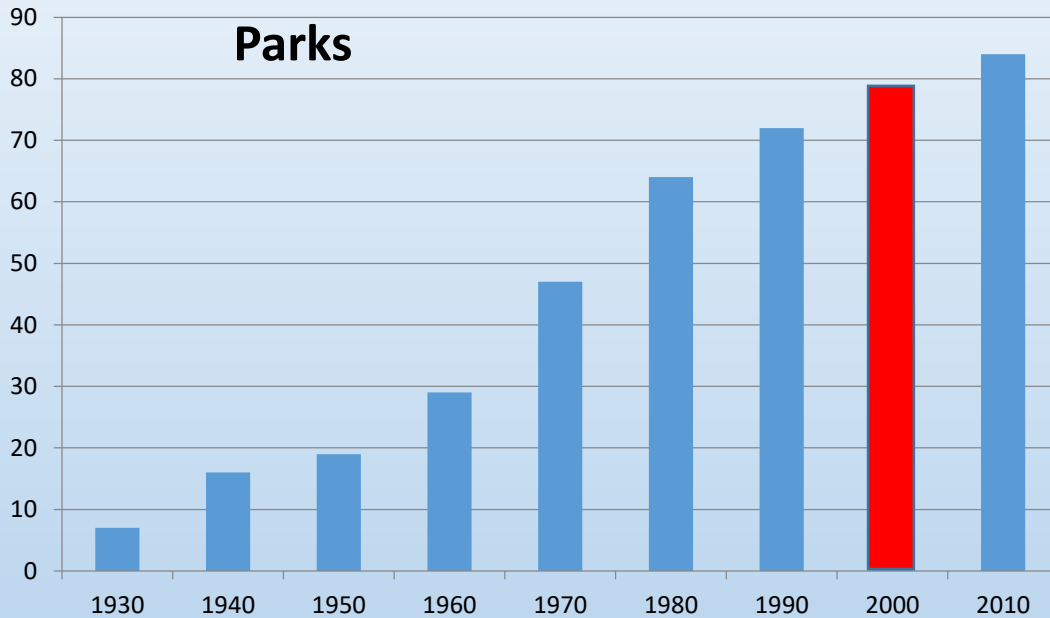



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STATE PARKS



Uses: Illustrating statistics

Number of Missouri State Parks



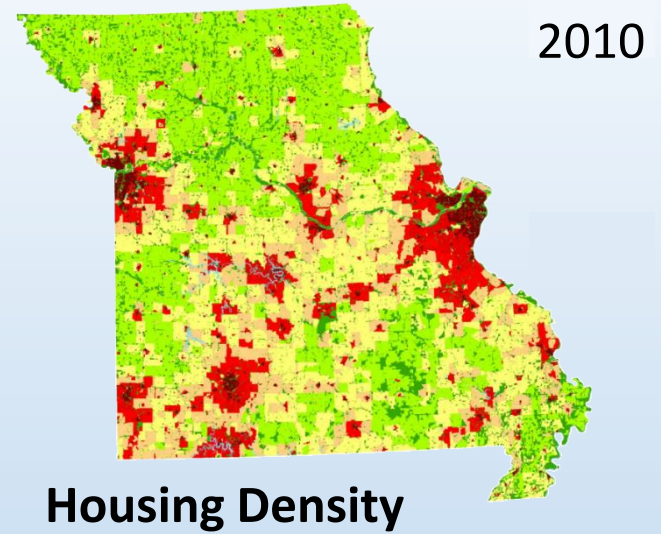
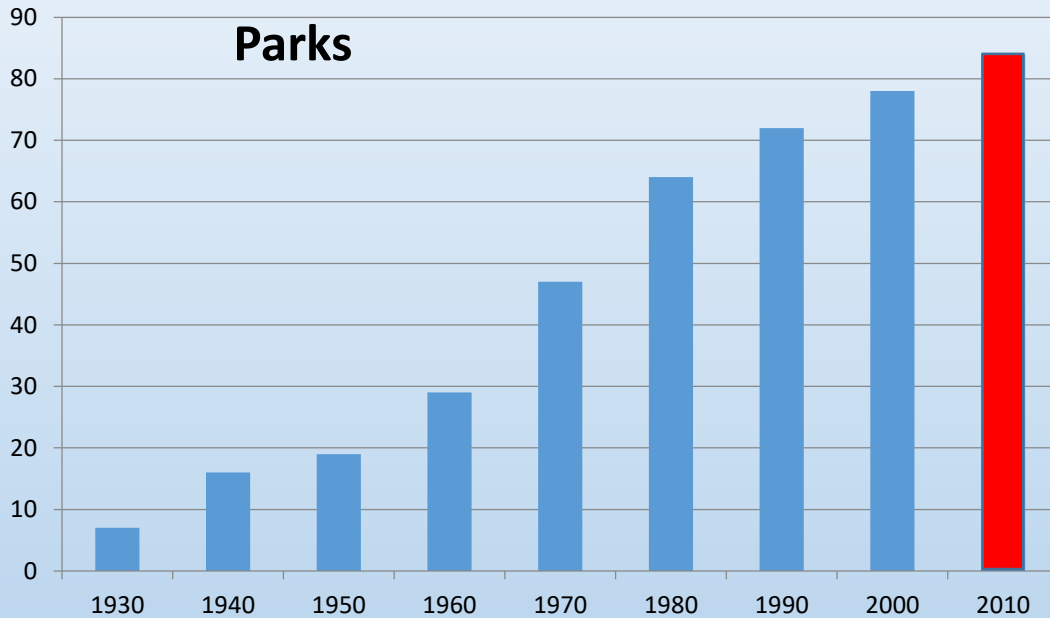
2000

Housing Density

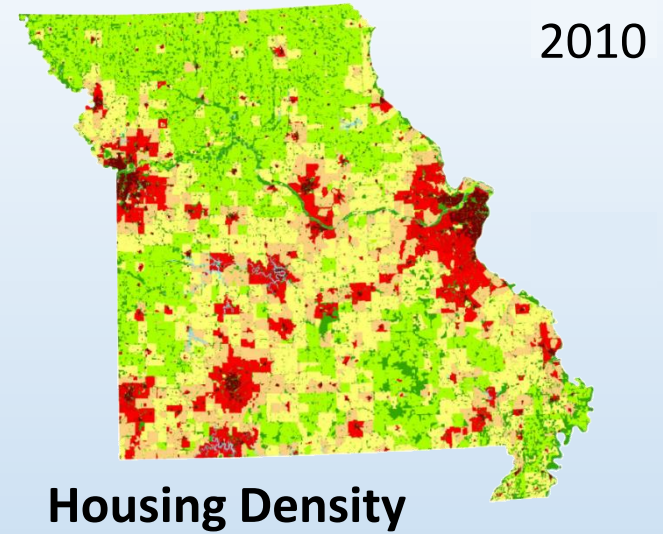
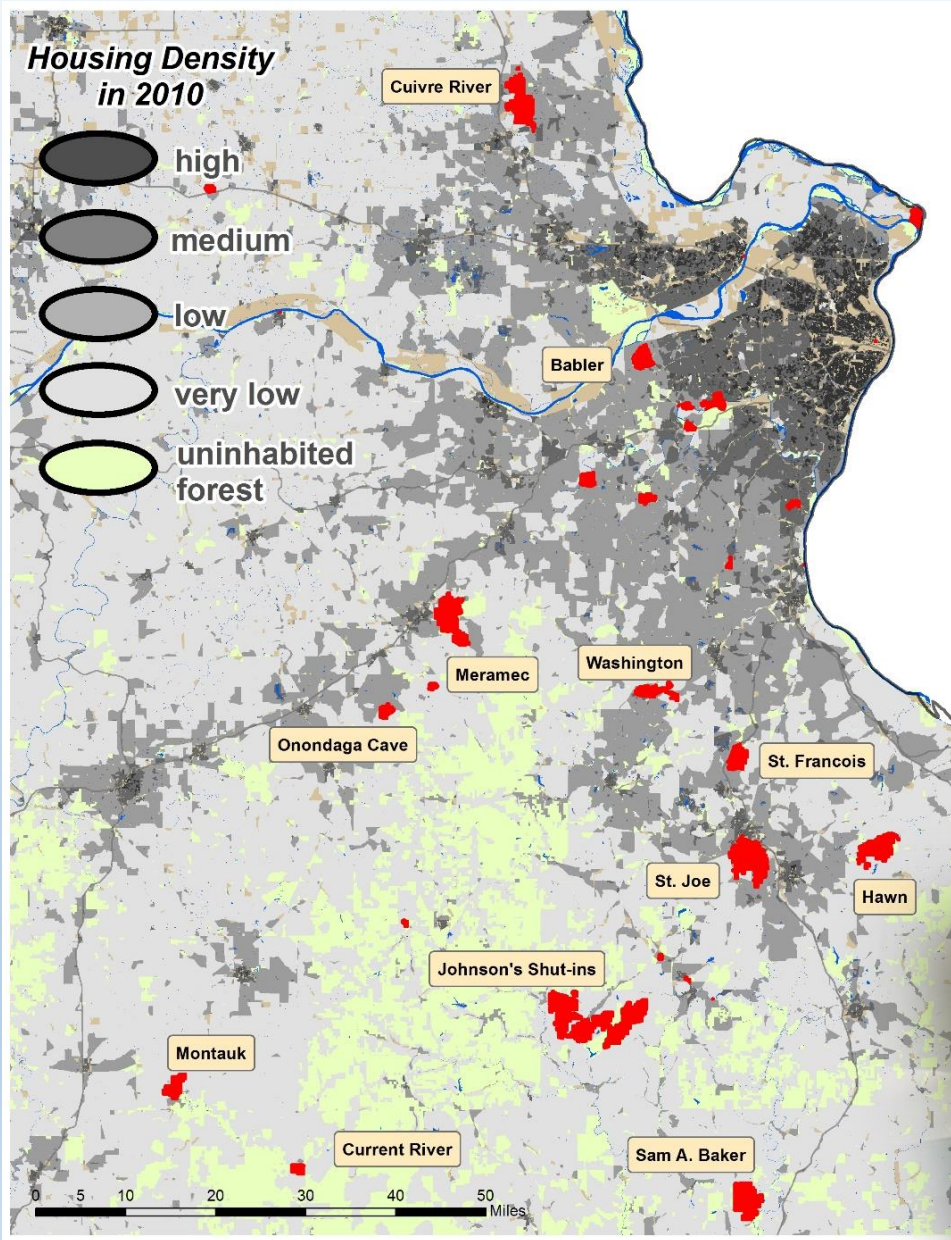


Uses: Illustrating statistics

Number of Missouri State Parks



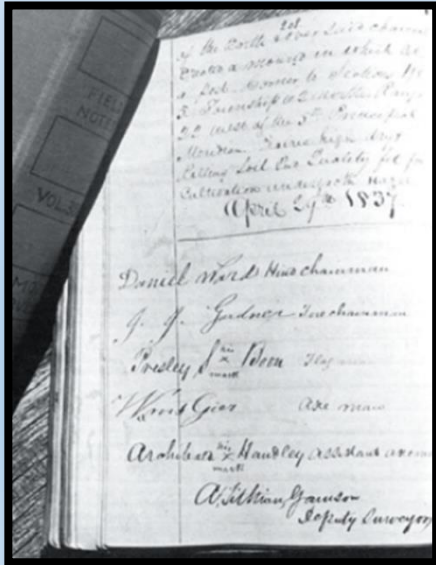
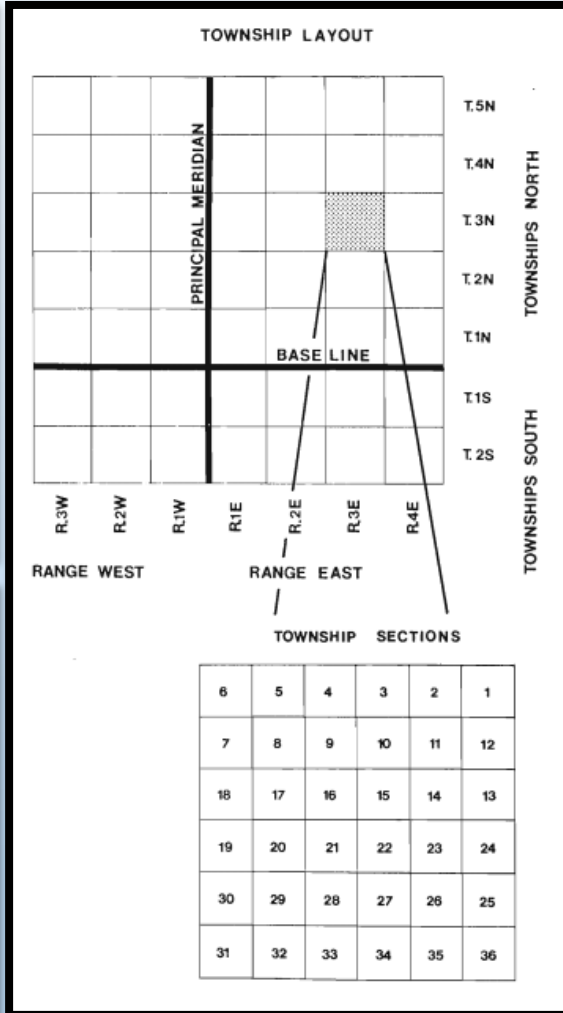
Uses: Illustrating statistics



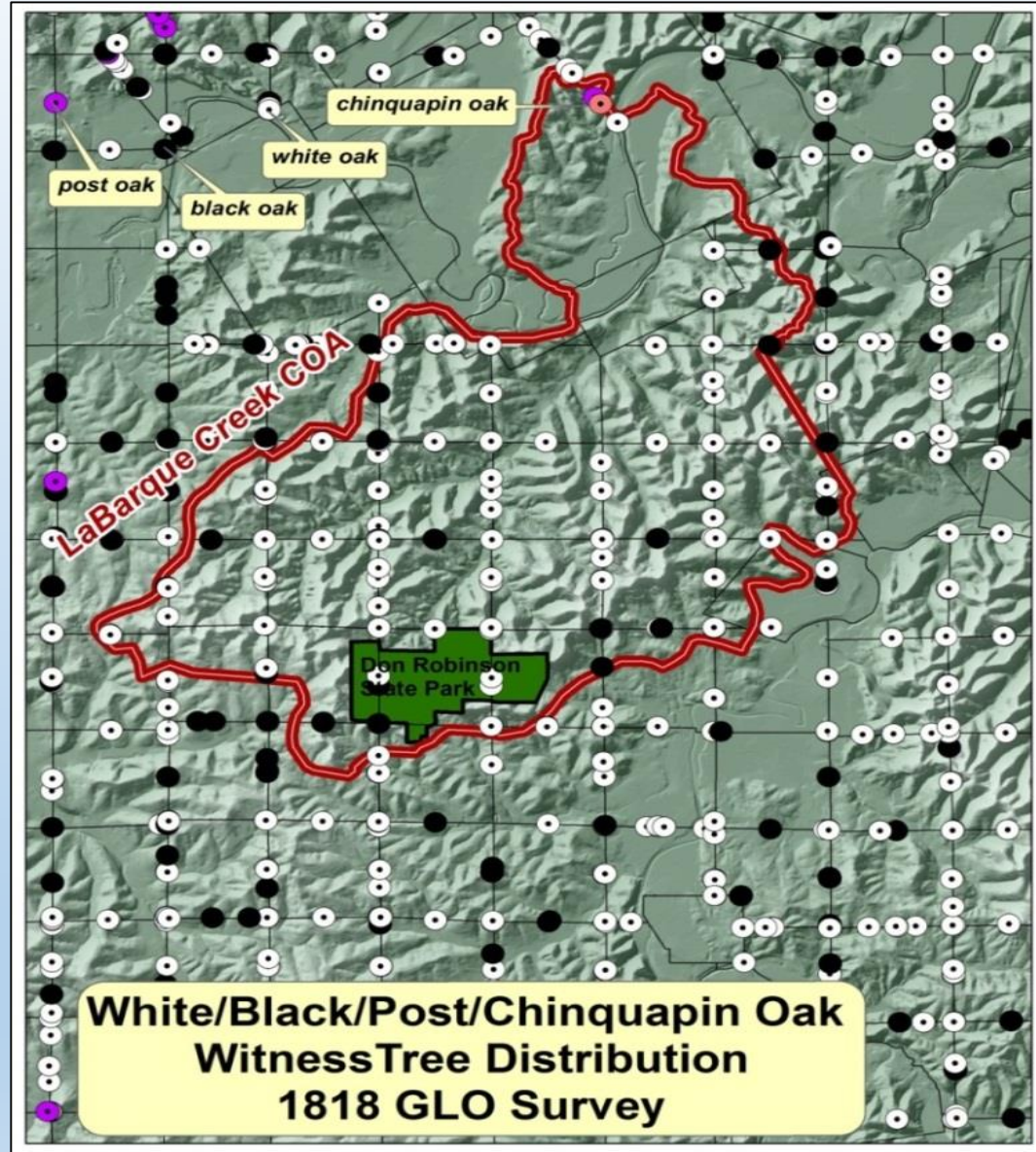
Uses: Ecosystem Mapping (historic)

General Land Office Survey Notes

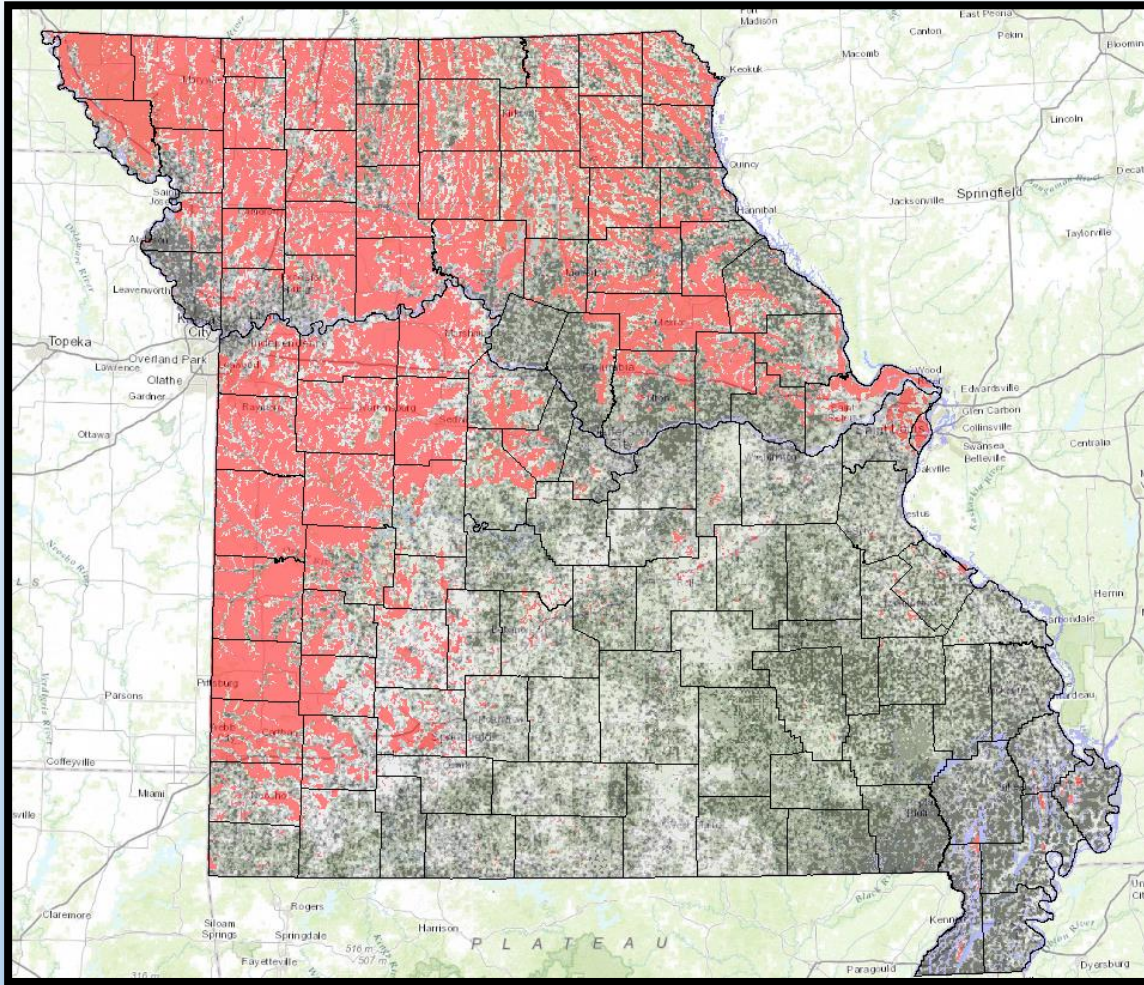
- Followed the Louisiana purchase in an effort to map lands in the state for prospective landowners
- In the Ozarks occurred 1815 – 1850's
- Recorded nature of the landscape, dominant vegetation, marked witness trees and noted the species and diameter



Uses: Ecosystem Mapping



Uses: Ecosystem Mapping



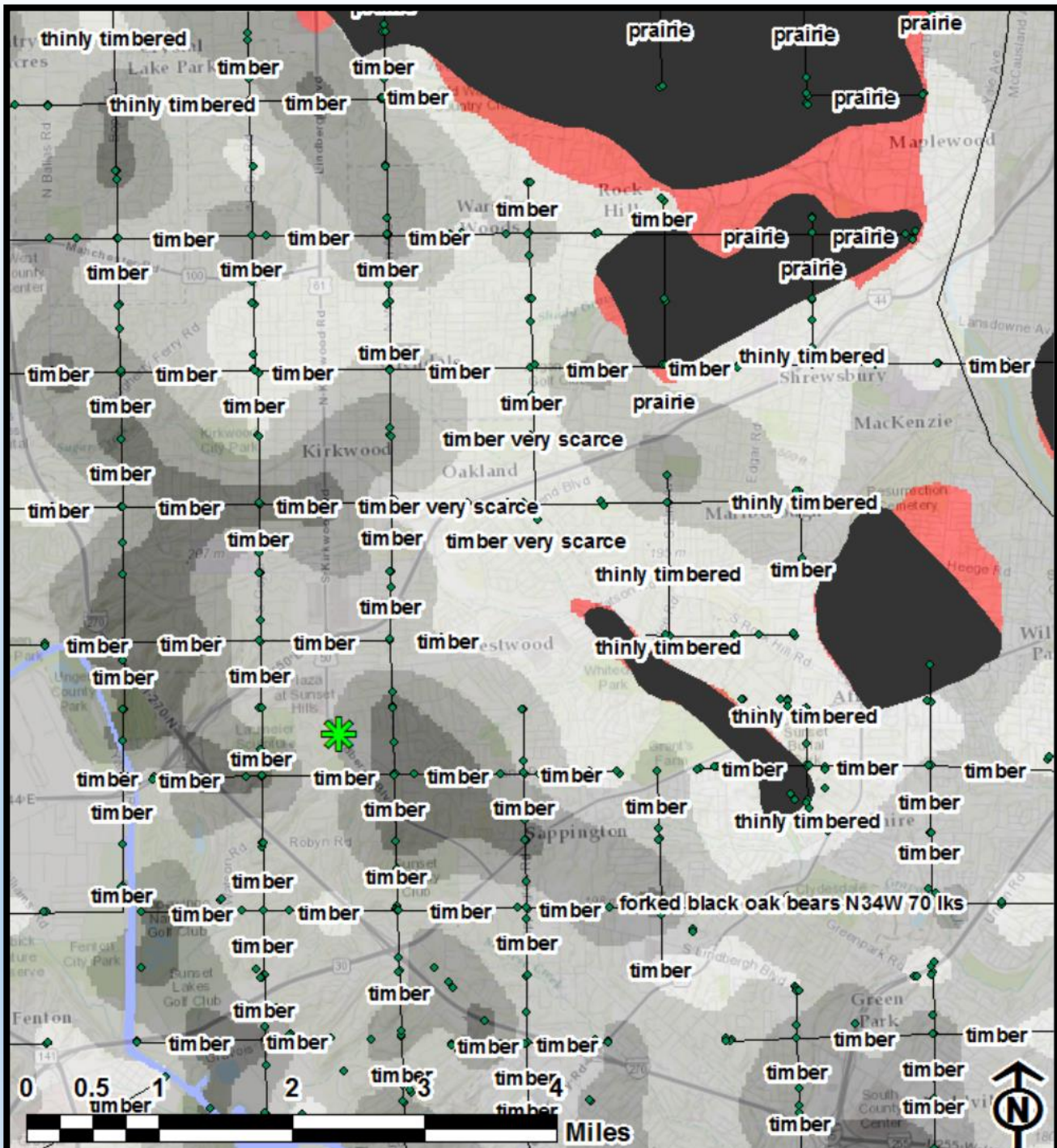
**Statewide
Acreage: 44.7
Million**

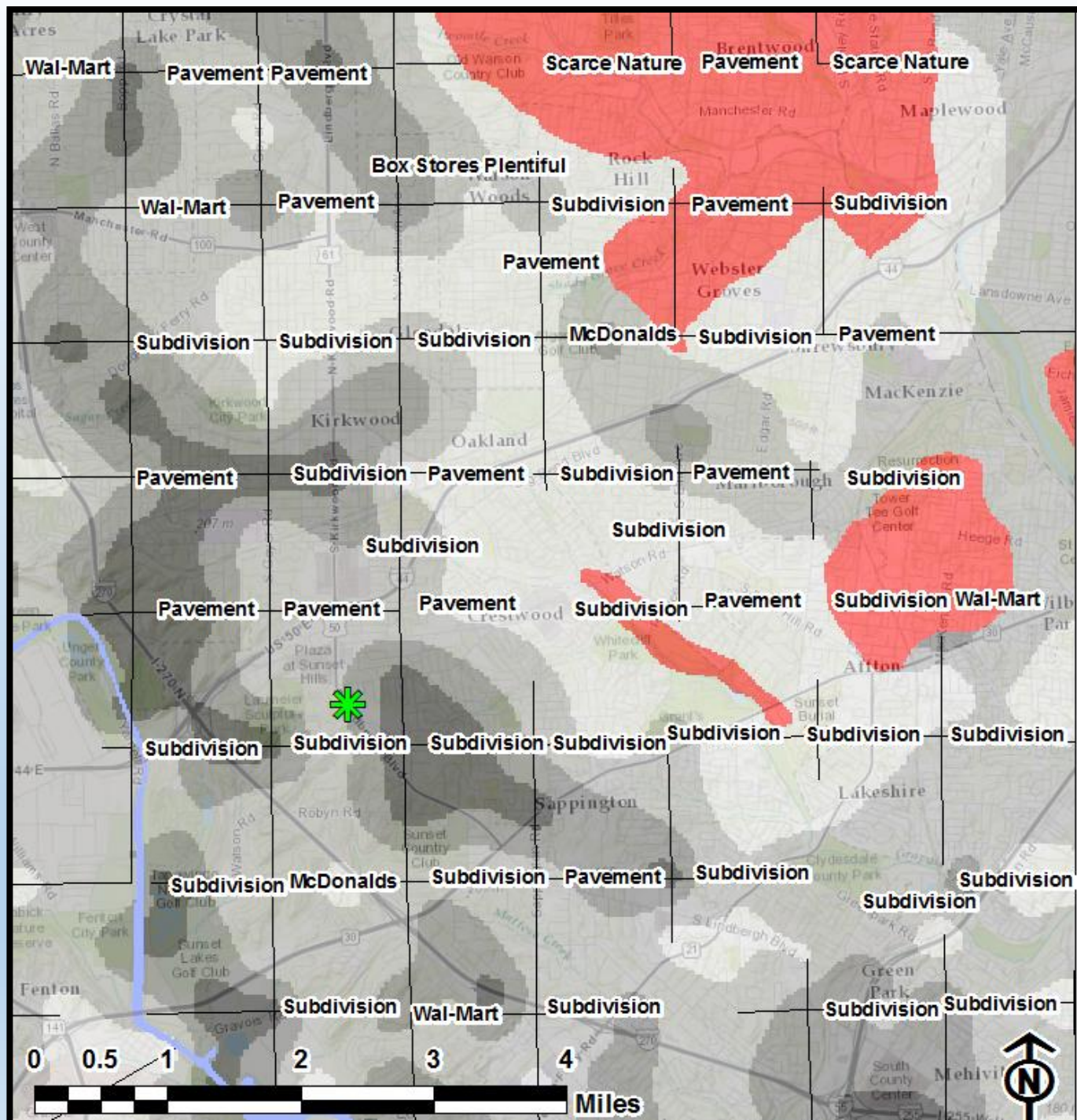
- **Glades -158,336 Acres - 0.03%**
- **Prairies – 12,028,160 Acres - 27%**
- **Savanna – 6,919,680 acres – 15.5%**
- **Open Woodland – 10,888,320 – 24.5%**
 - **Total 'Prairie Affinity' acreage: 67%**

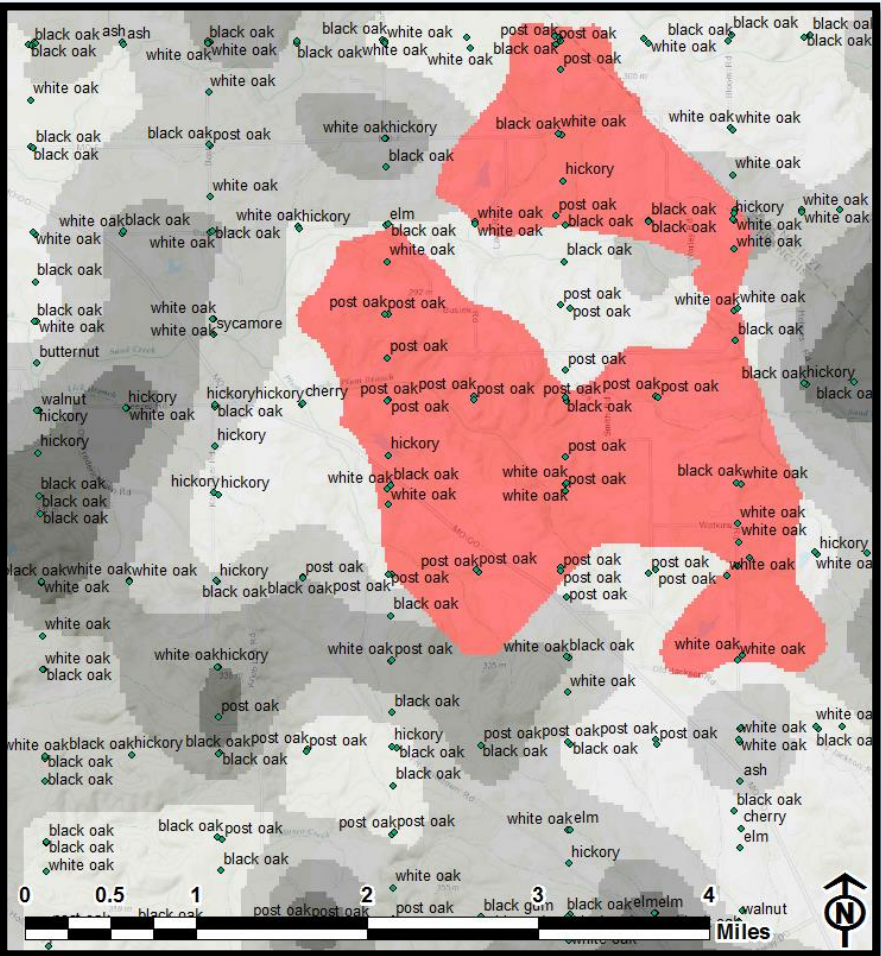


University of Missouri

- **James Harlan – Geography Department. Historic Vegetation of Missouri**





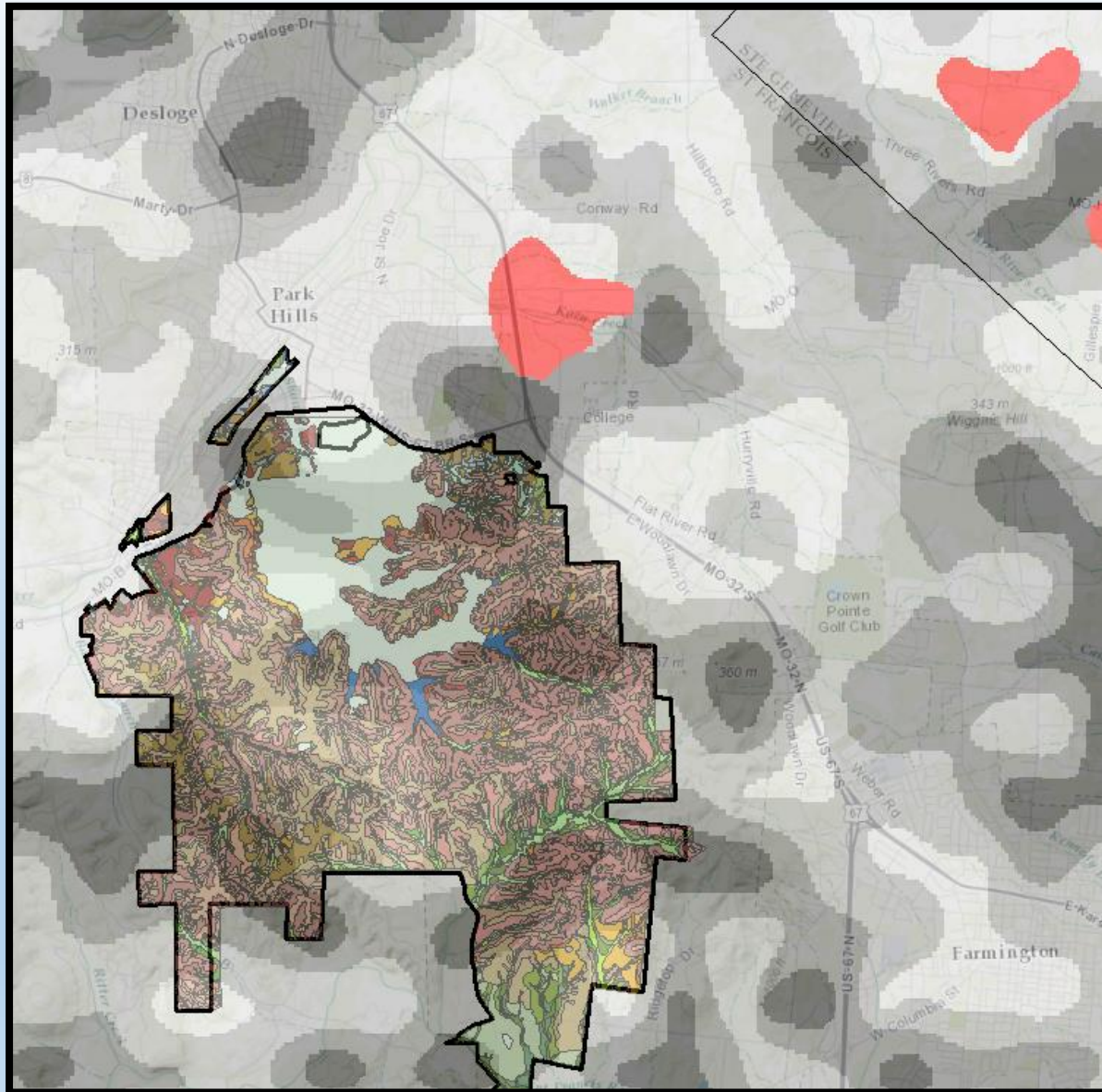


Farmington

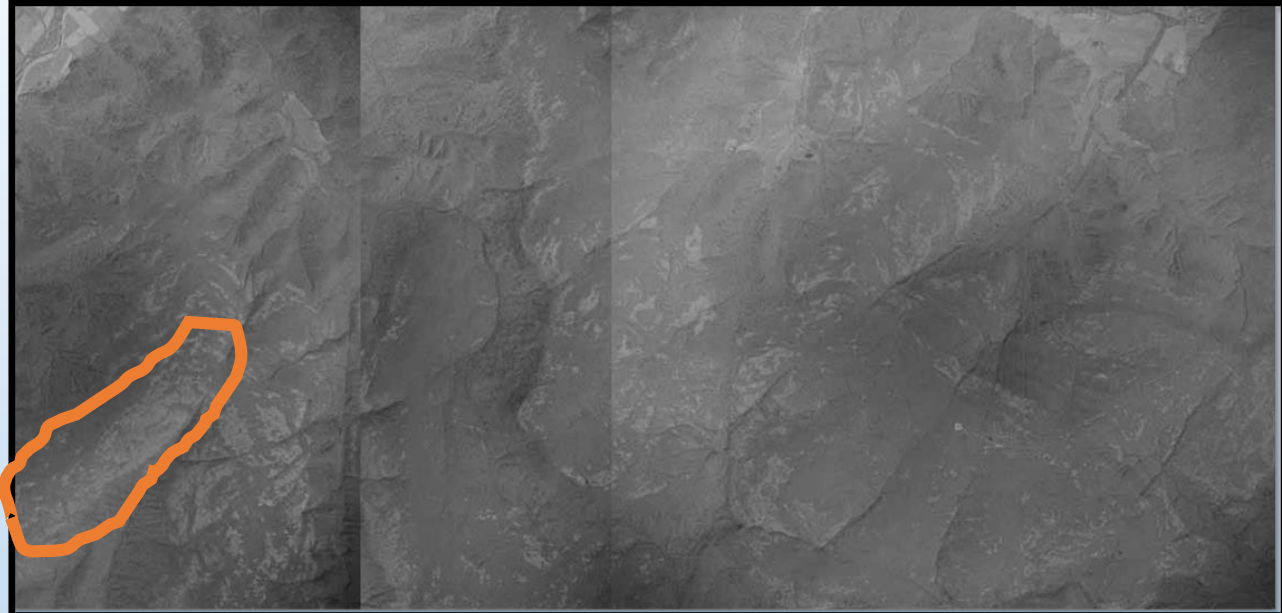


Shannon County

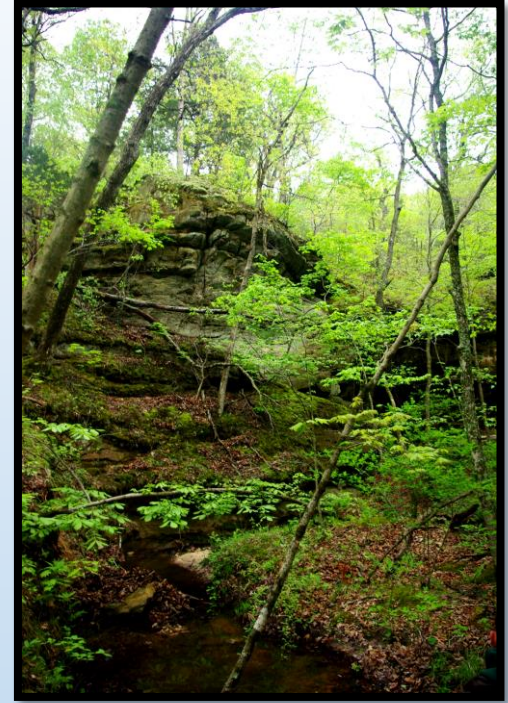
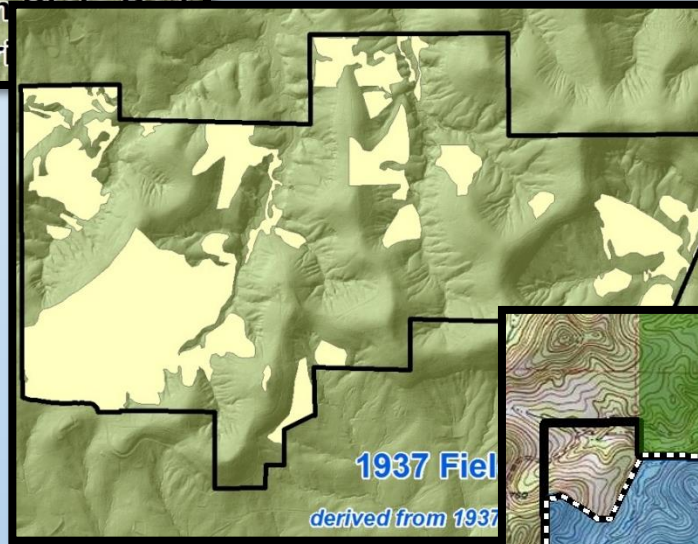
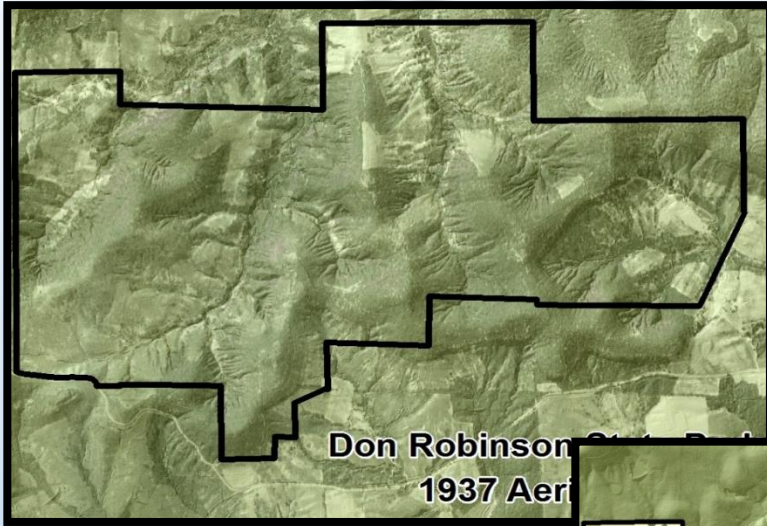
Uses: Ecosystem Mapping



Uses: Ecosystem Mapping

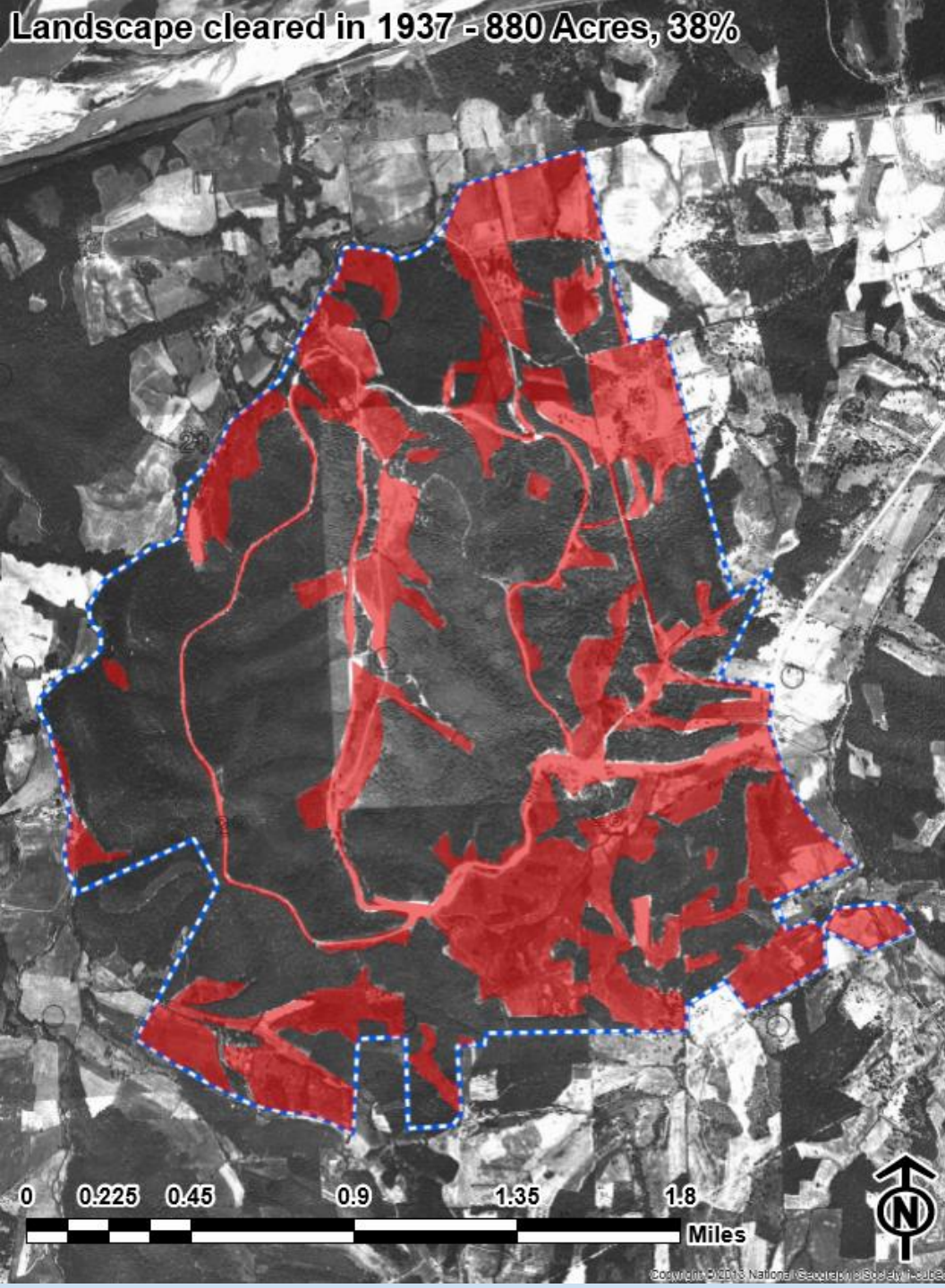


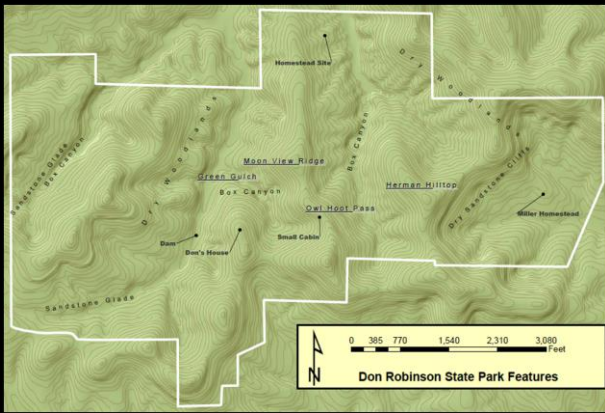
Uses: Mapping past damage



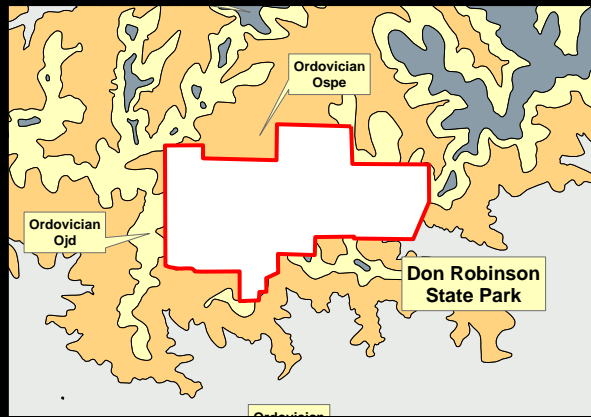
Landscape cleared in 1937 - 880 Acres, 38%

Uses: Ecosystem Mapping

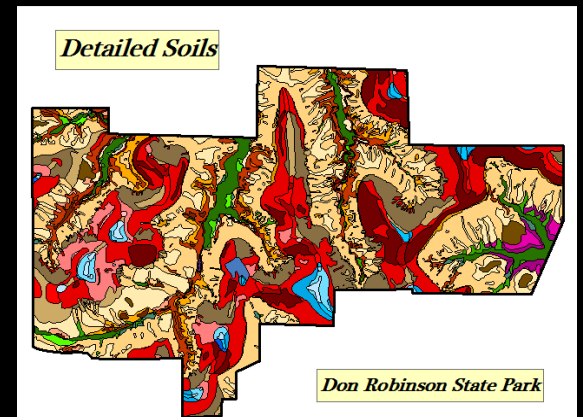




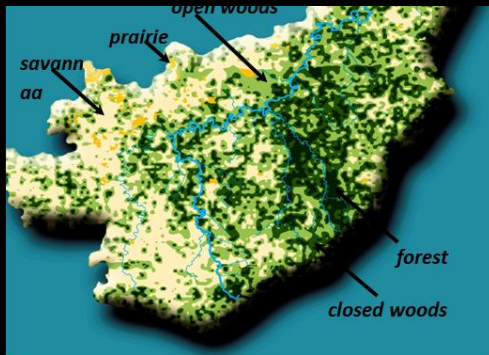
topography



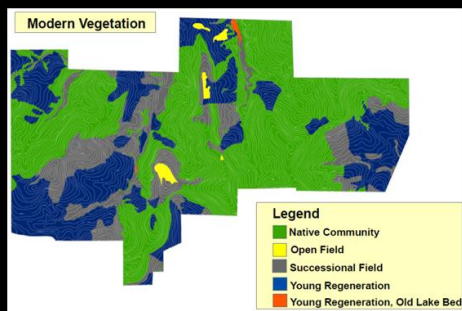
geology



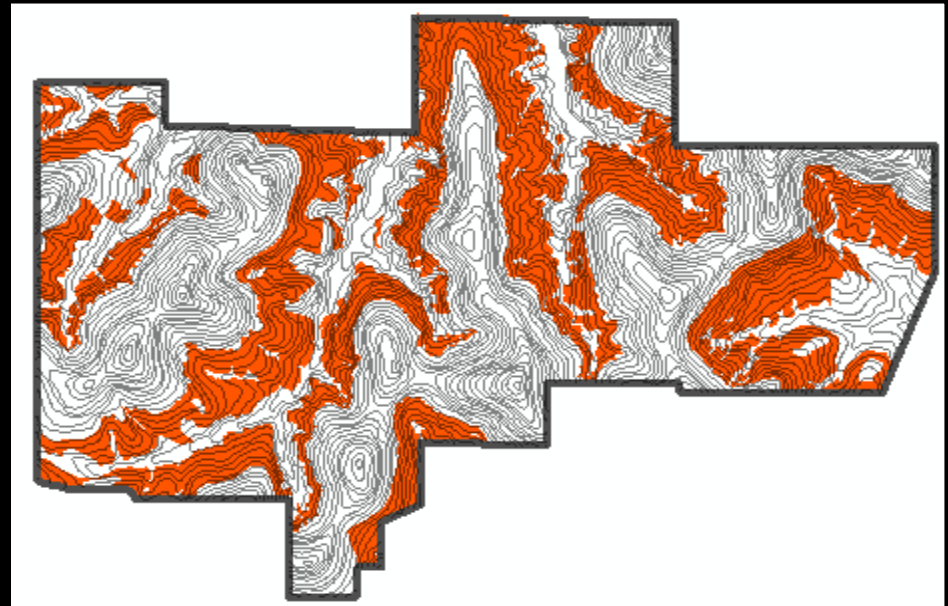
soils



historic vegetation

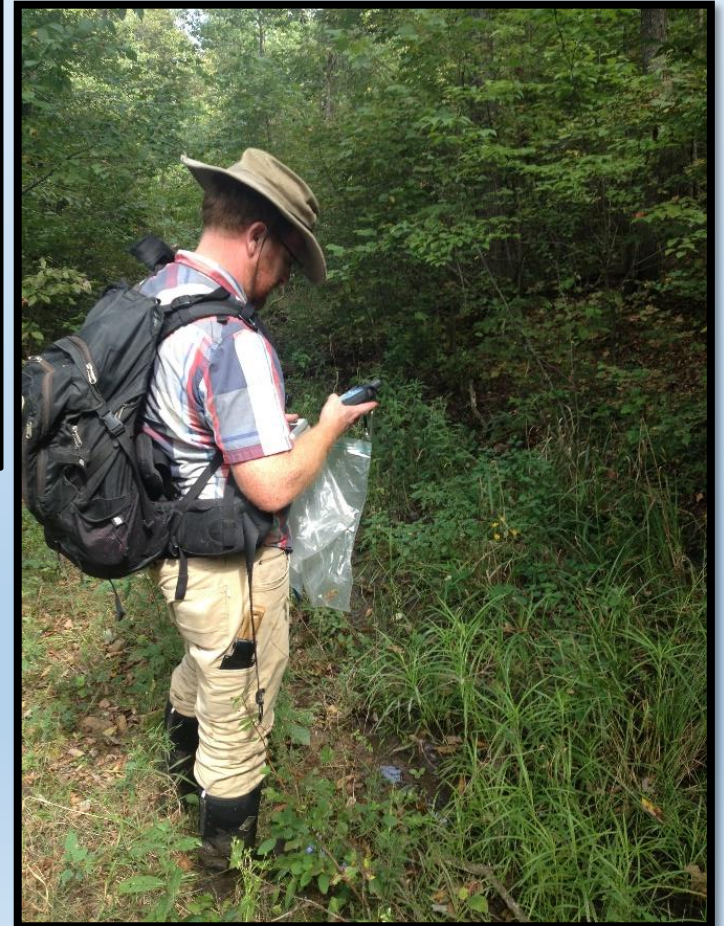
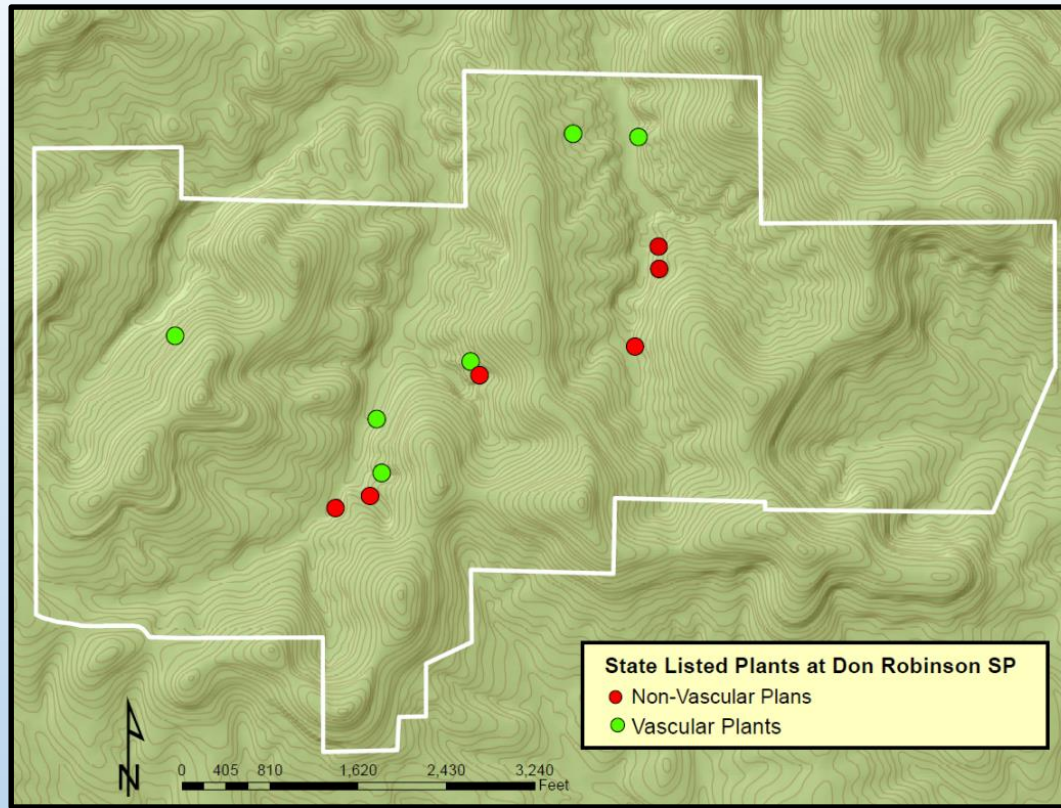


modern vegetation

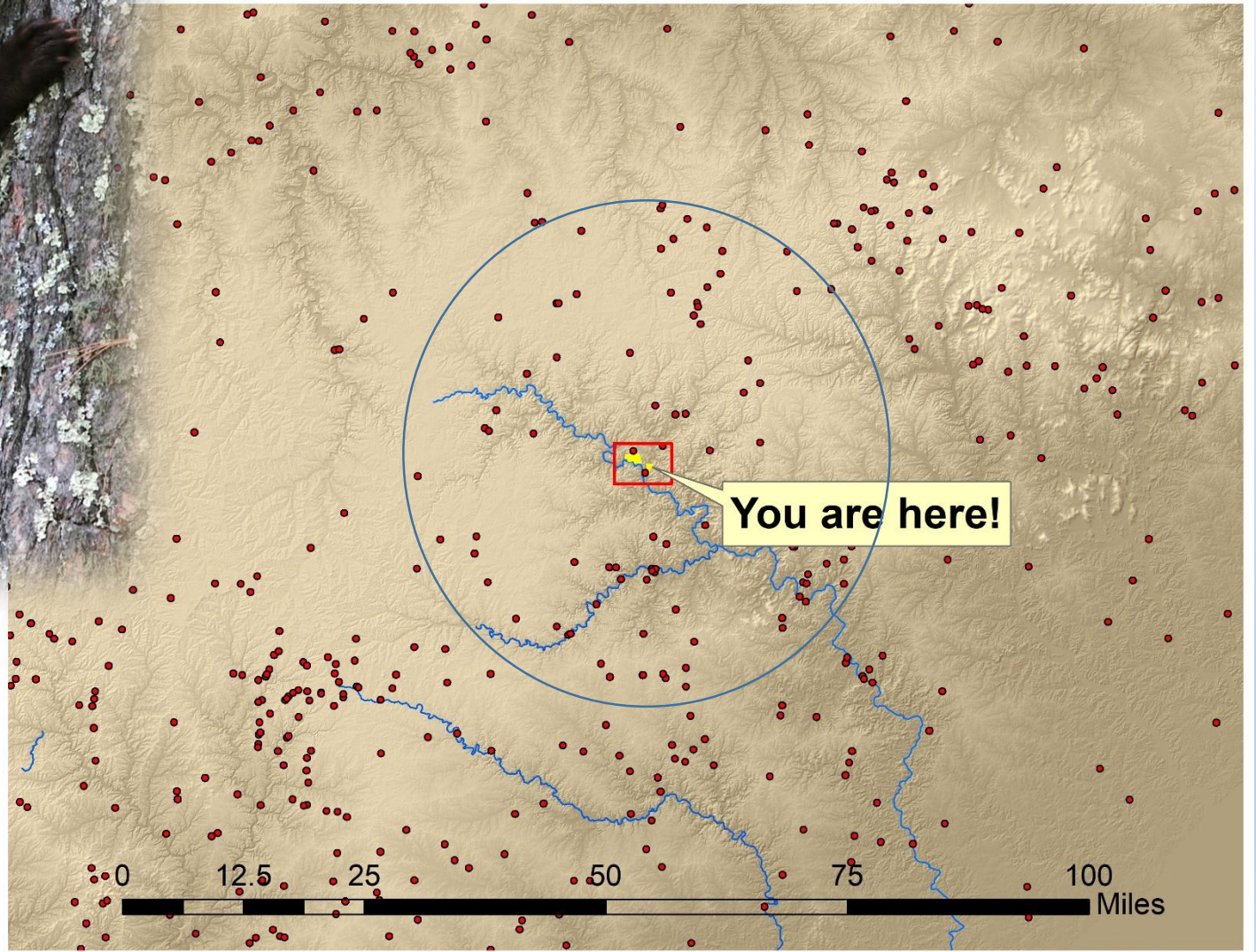


Natural Communities

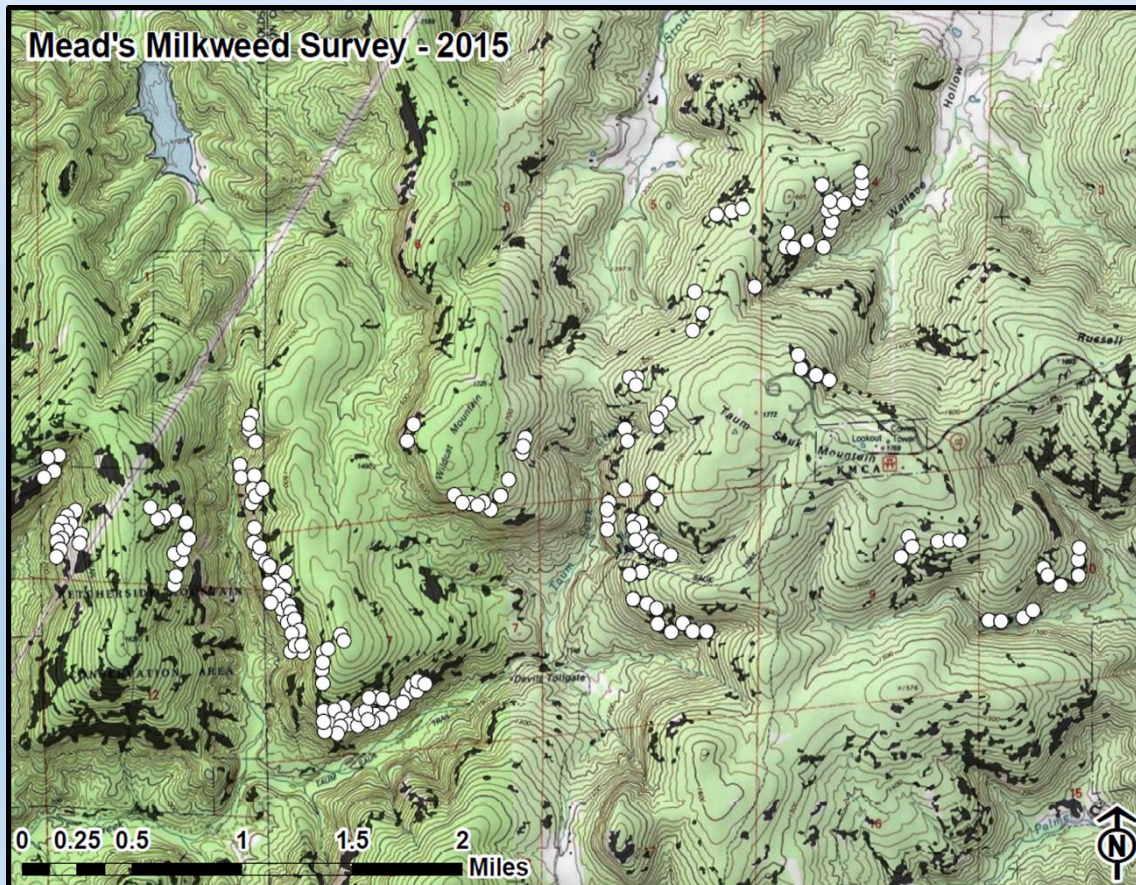
Uses: Rare Species Records



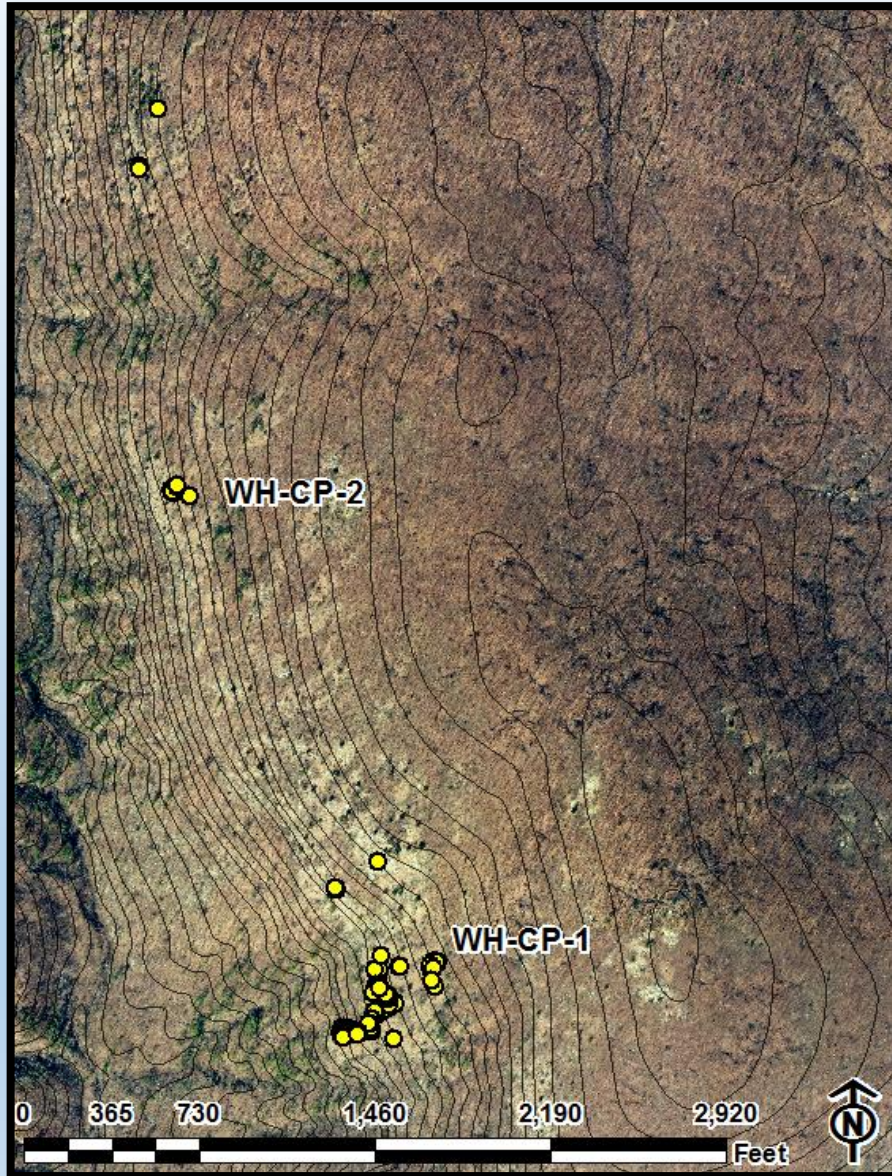
Uses: Rare Species Records



Uses: Rare Species Records



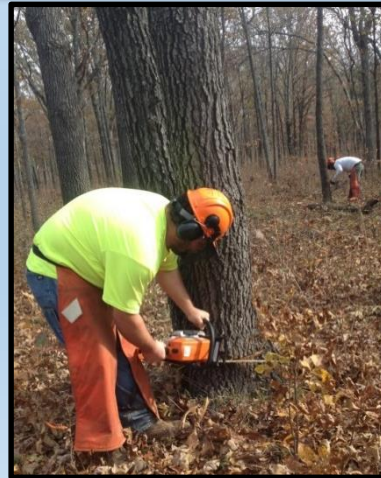
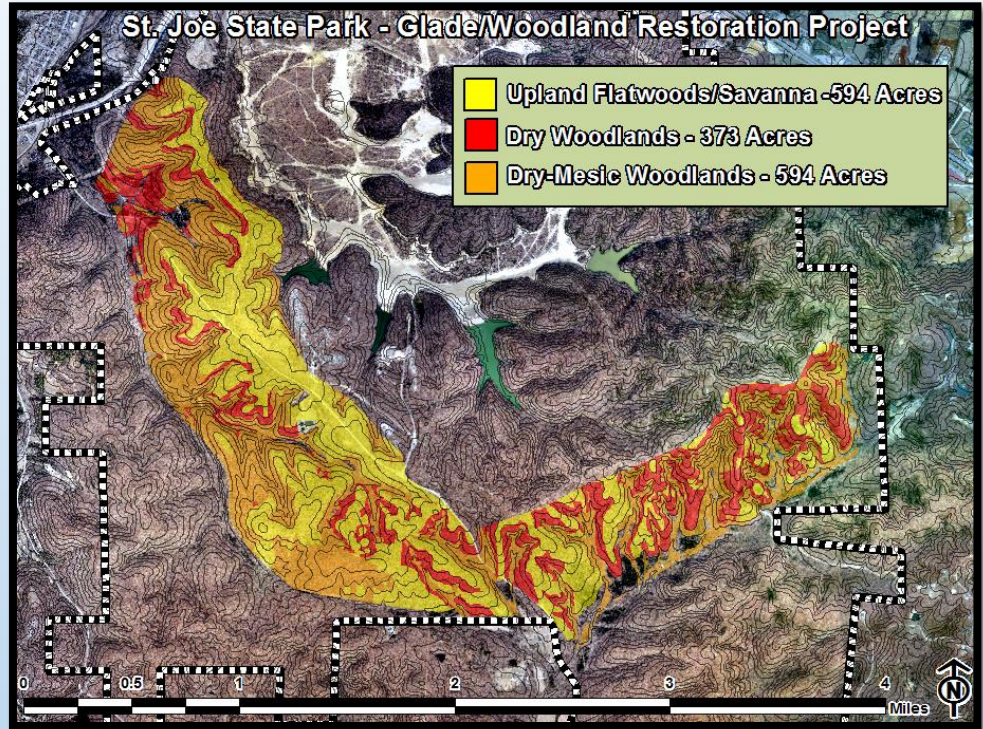
Uses: Rare Species Records



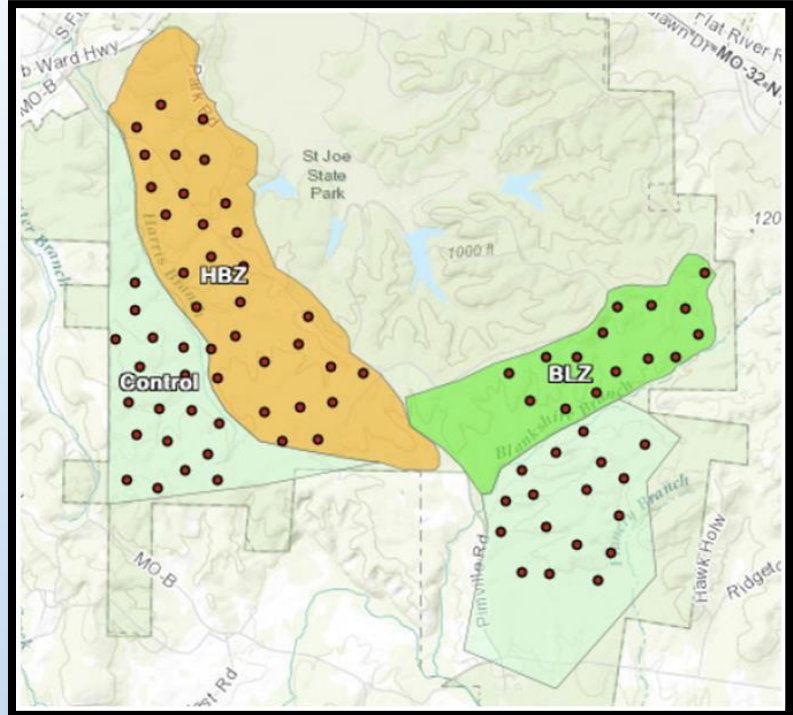
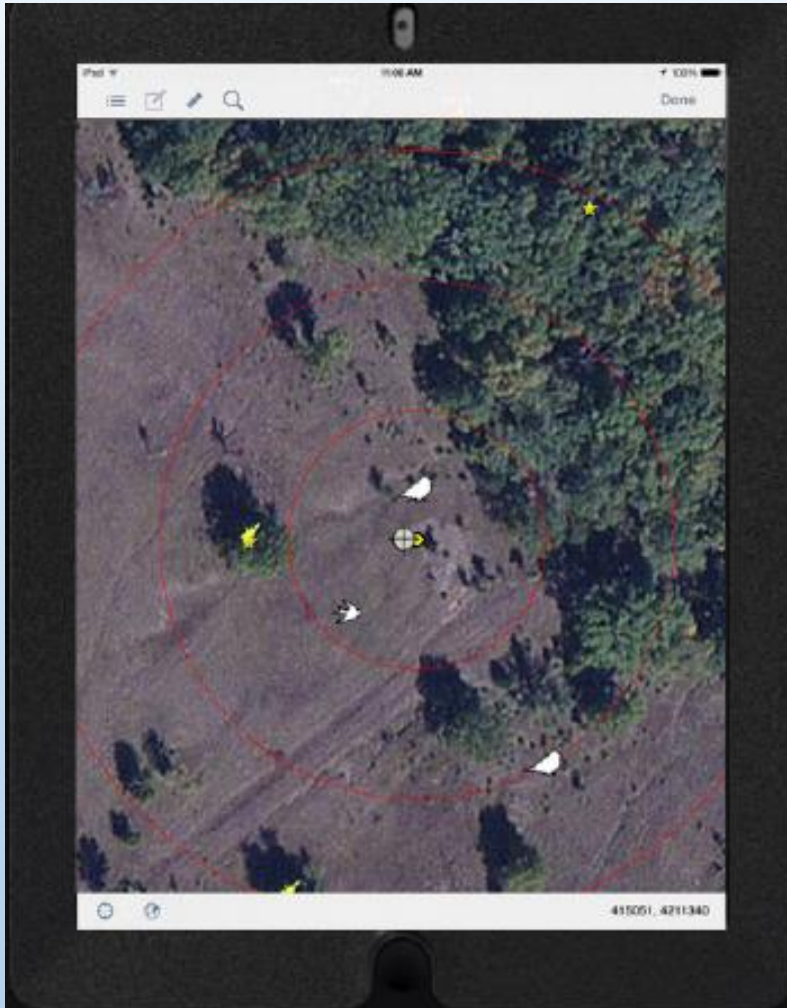
Uses: Rare Species Records



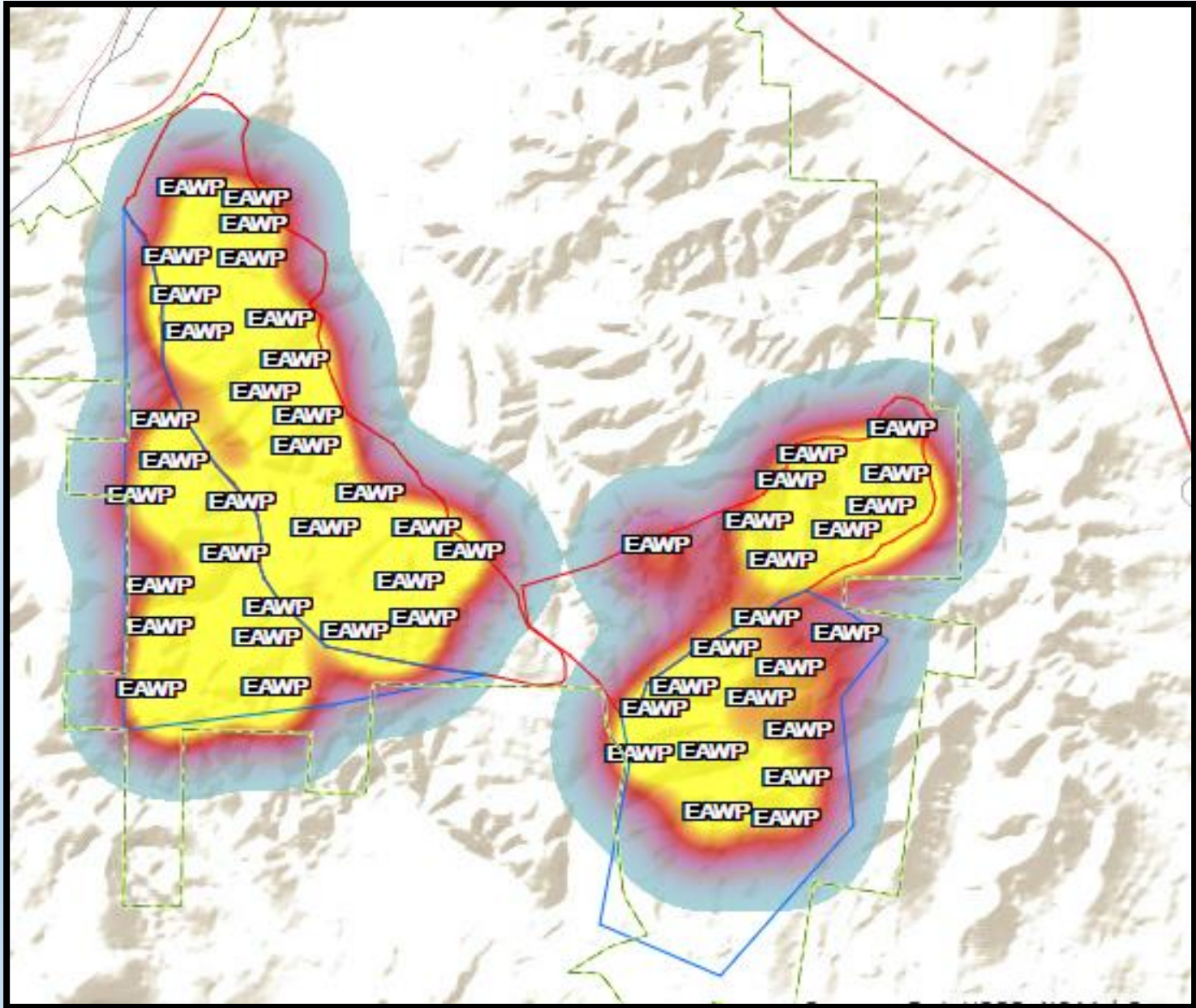
Uses: Research



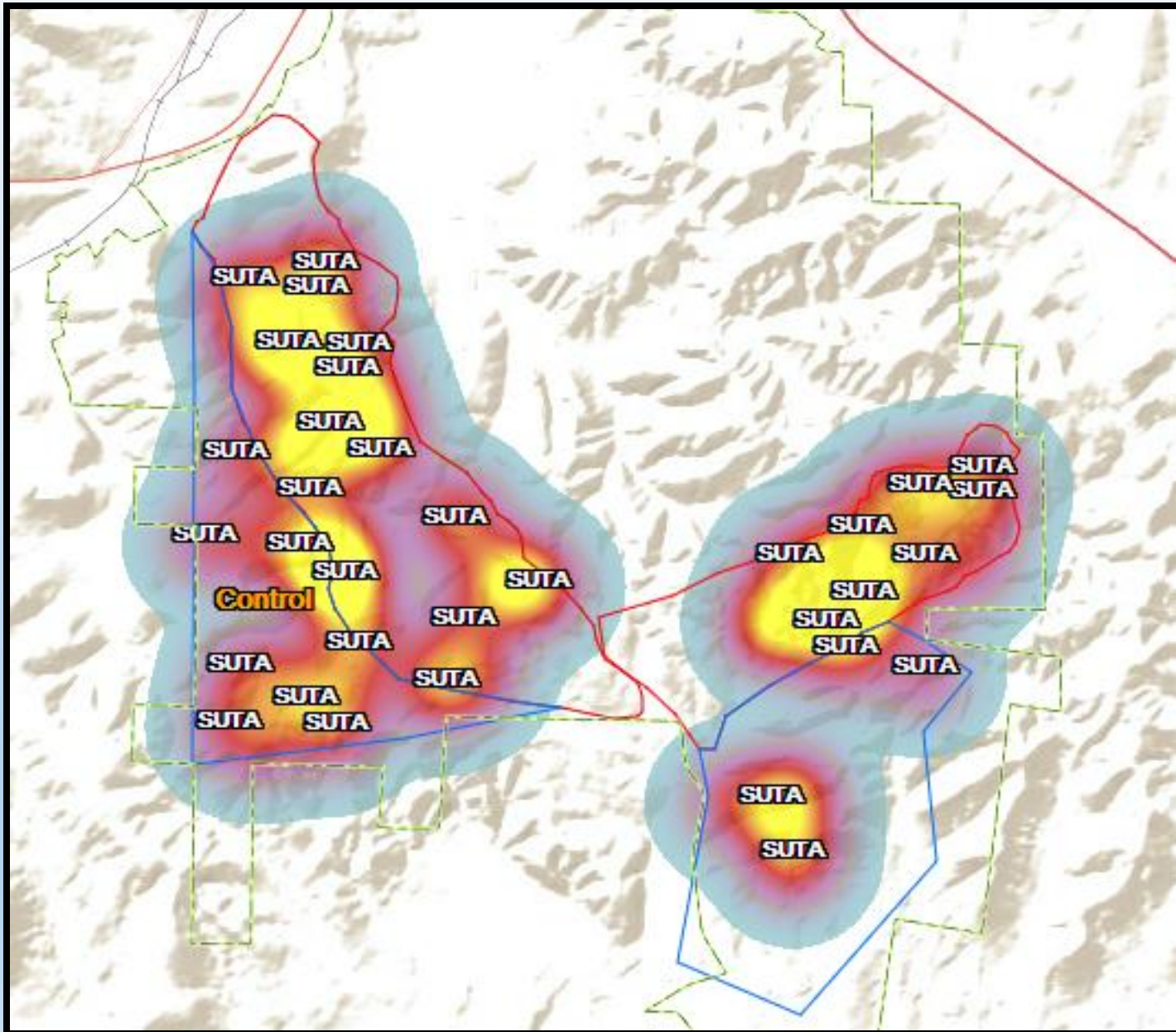
Uses: Research



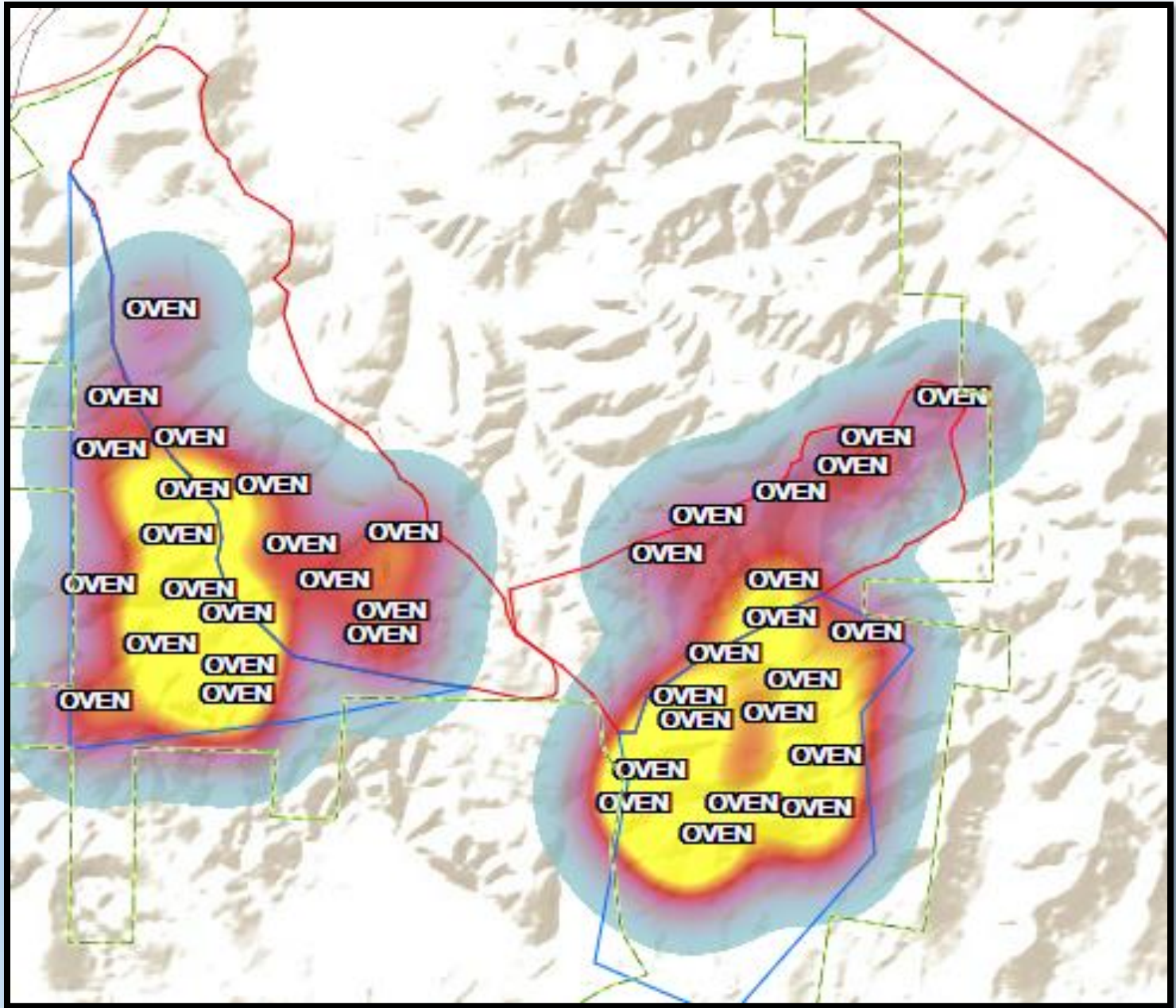
Uses: Research



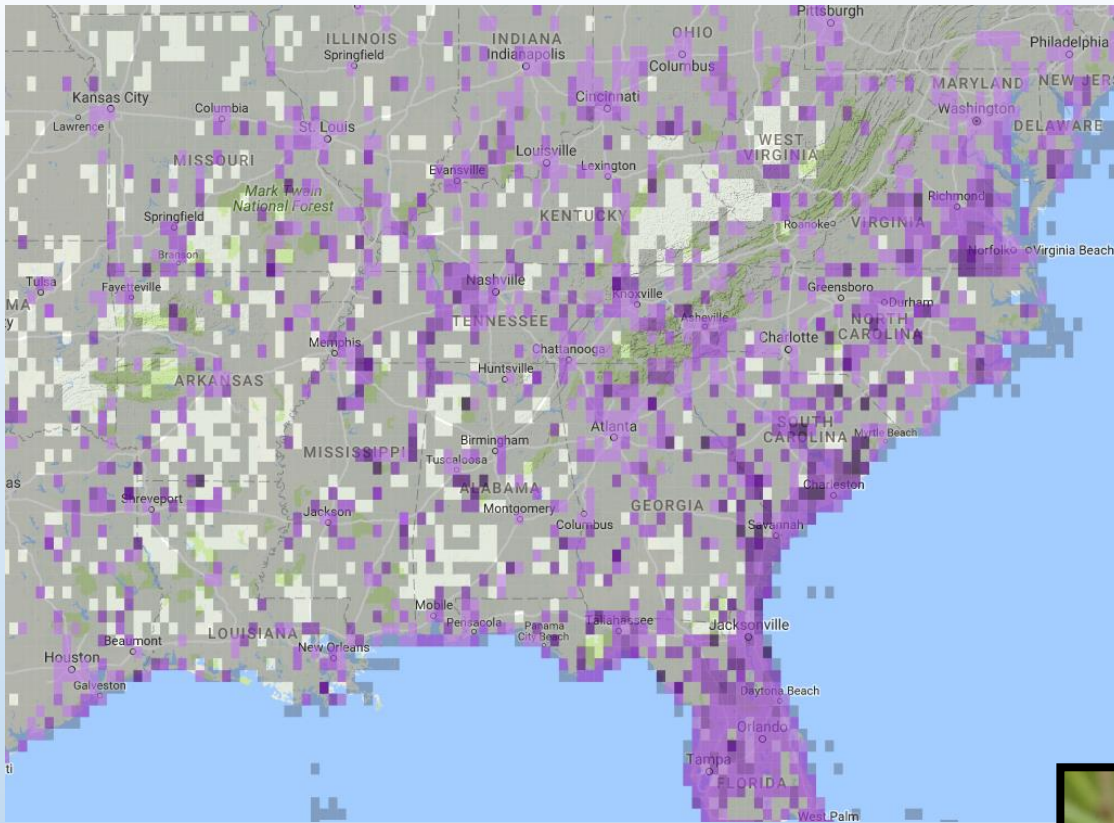
Uses: Research



Uses: Research

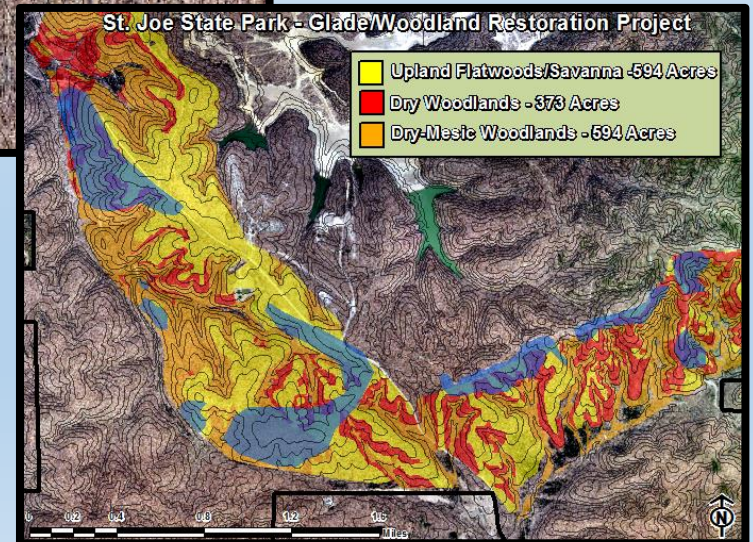
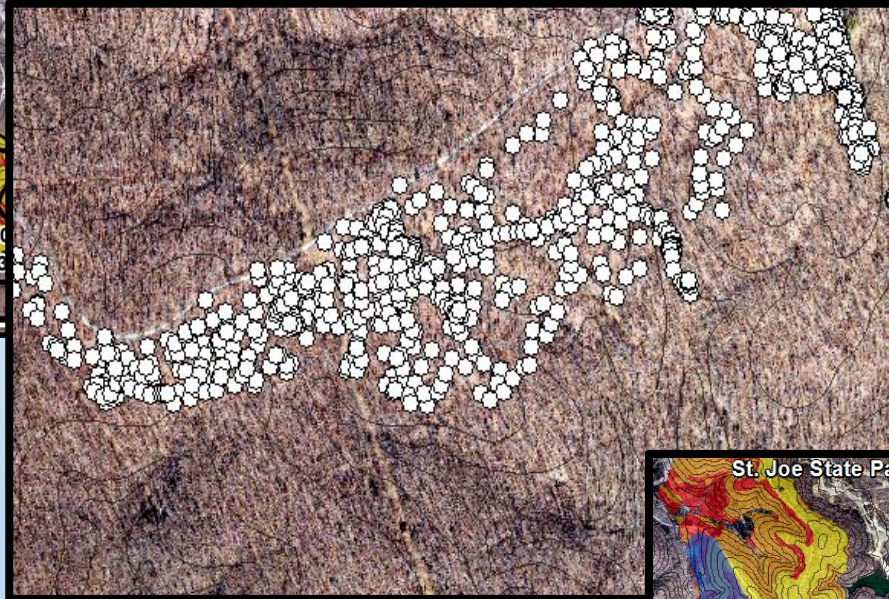
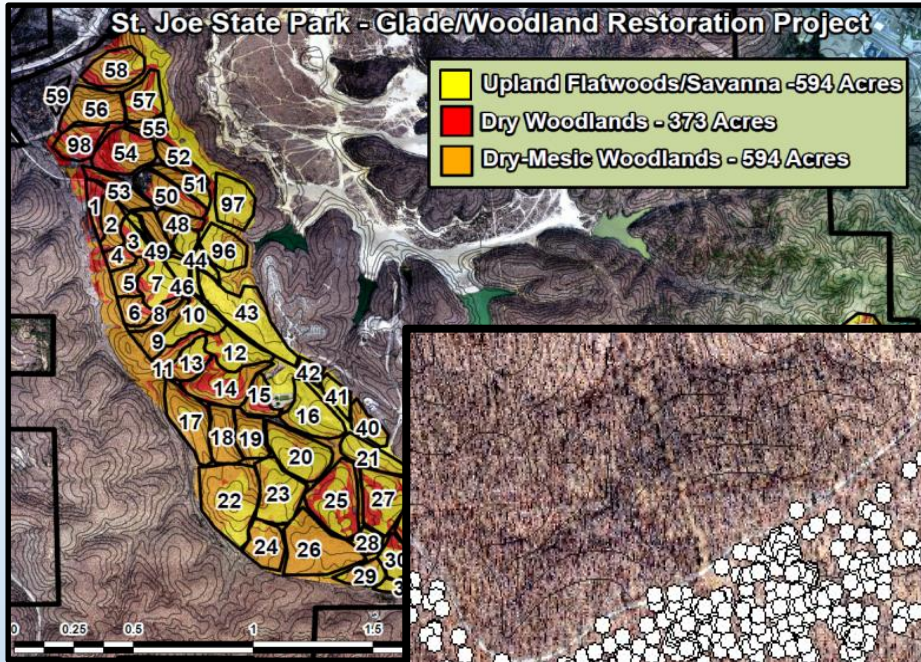


**Uses:
Research/
Monitoring**

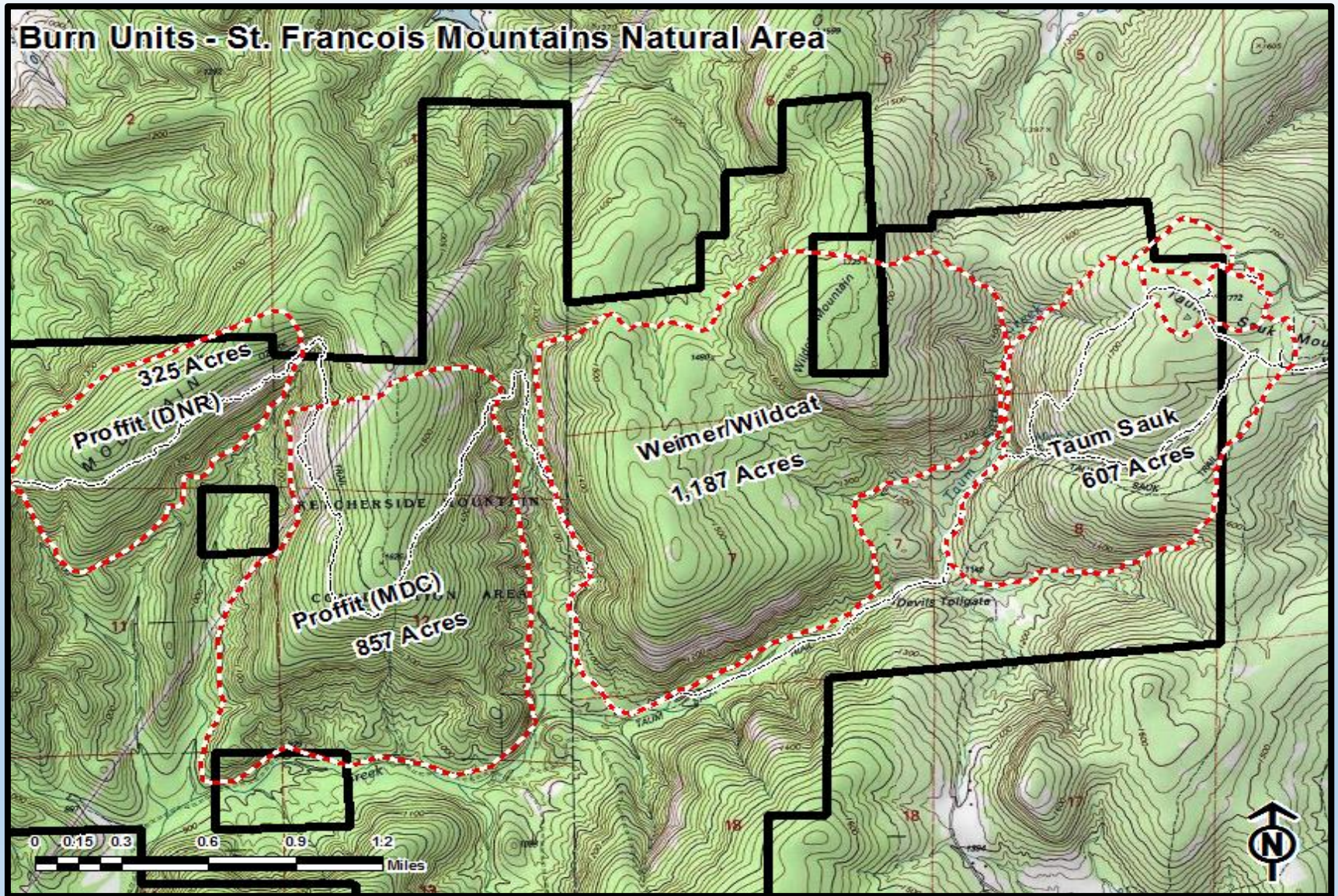


Yellow-throated Warbler

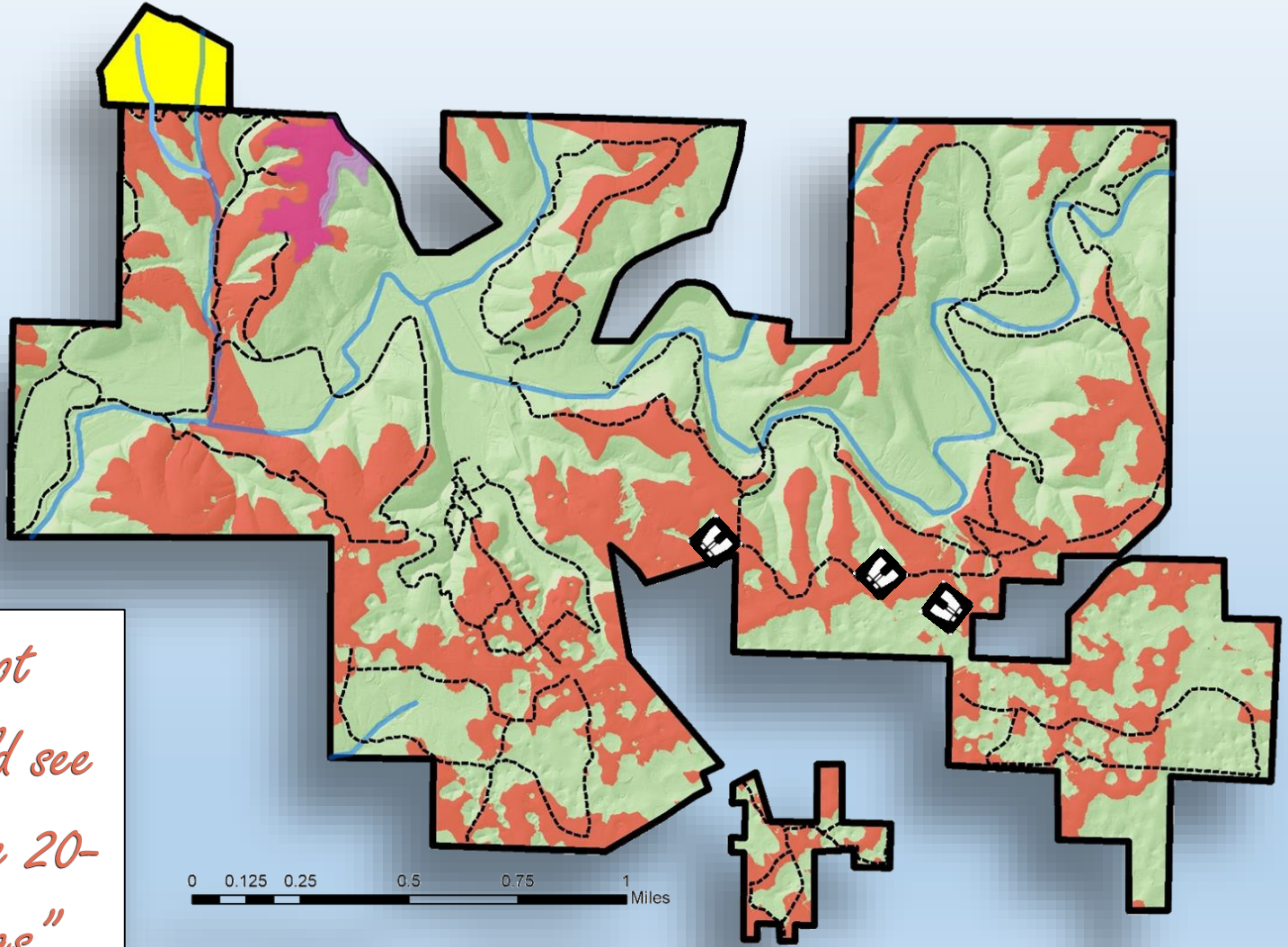
Uses: Mapping stewardship activities



Uses: Mapping stewardship activities

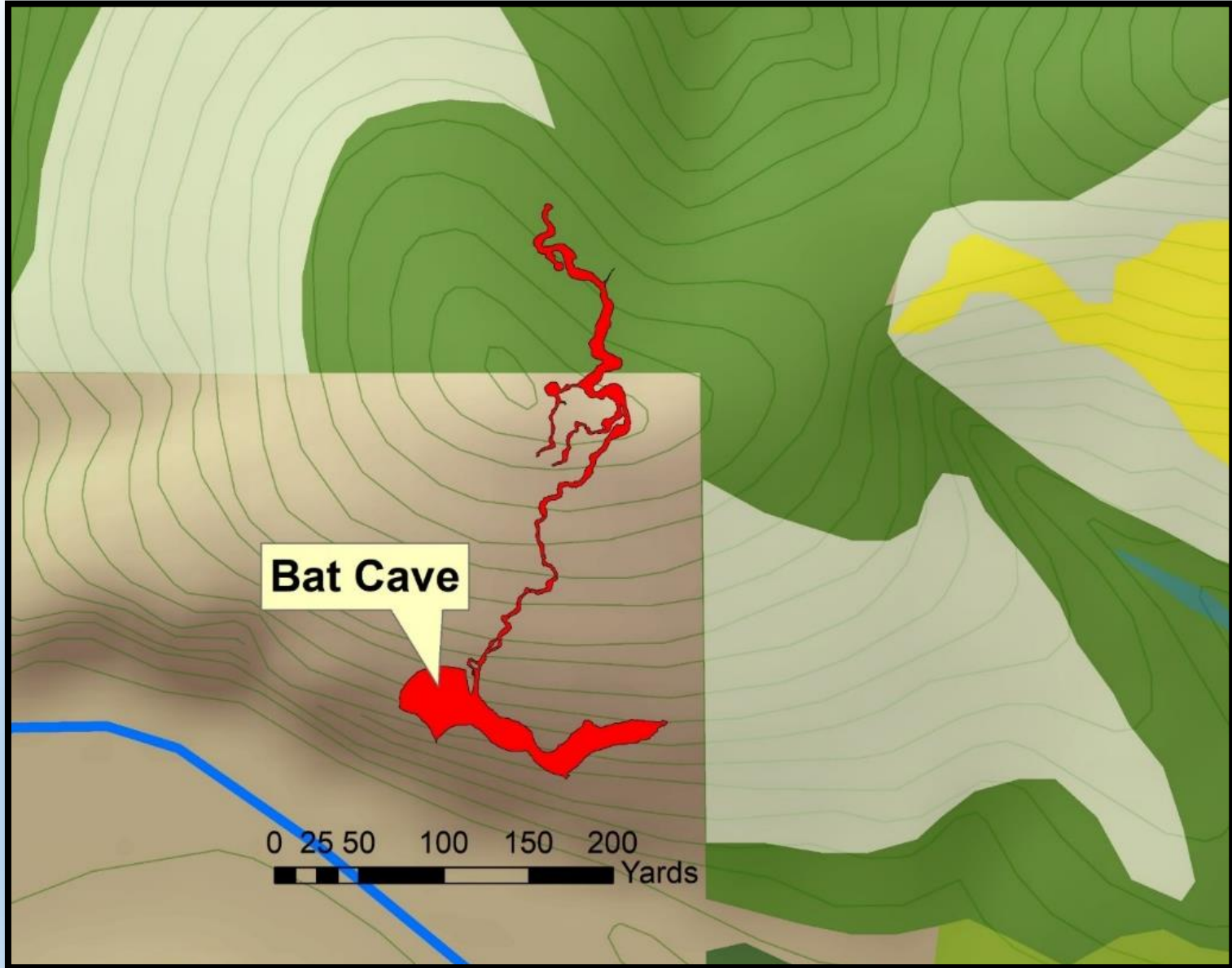


Uses: Impact of development

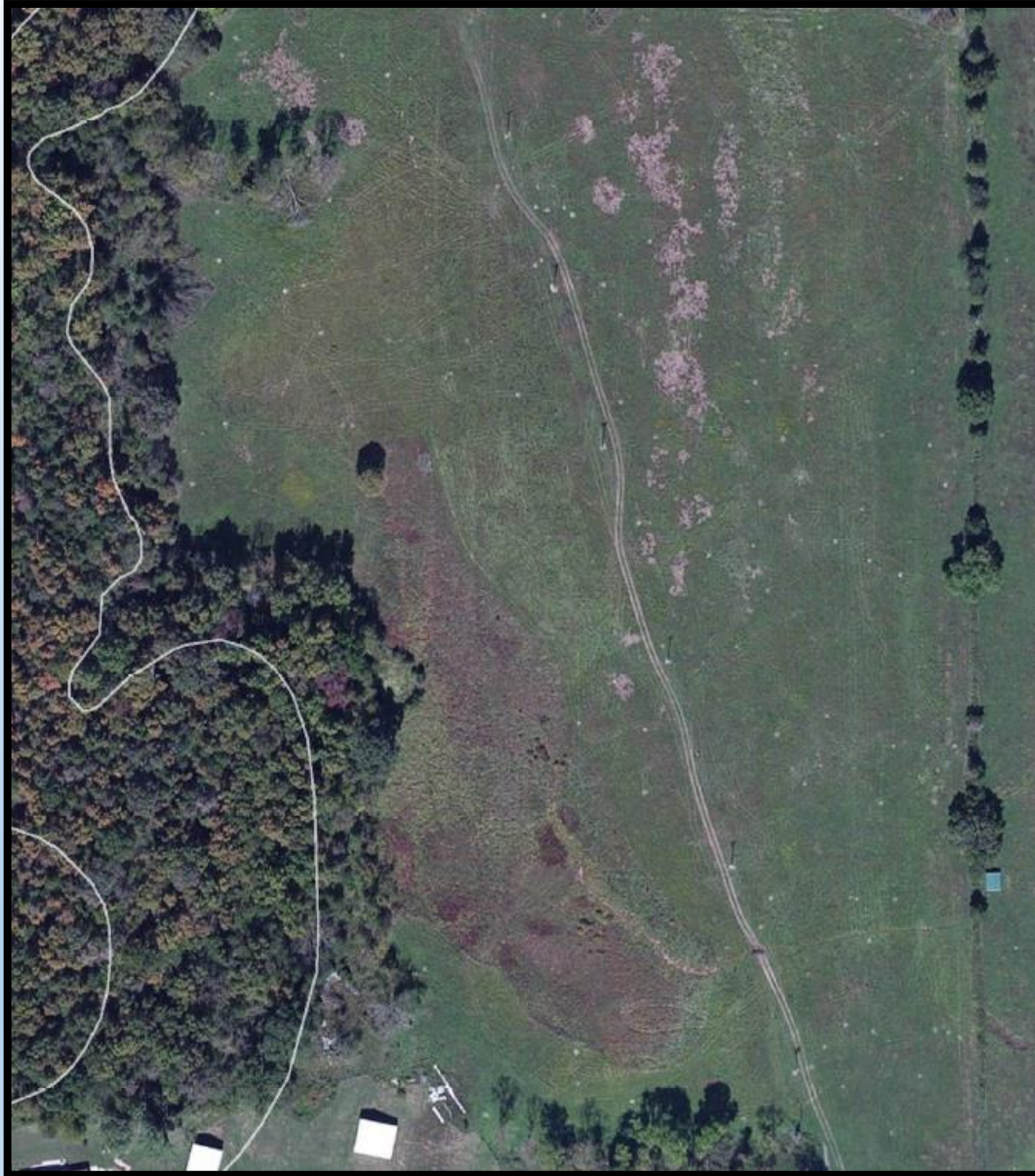


"Where a 6-foot tall person could see Parkside Estate 20-foot tall buildings"

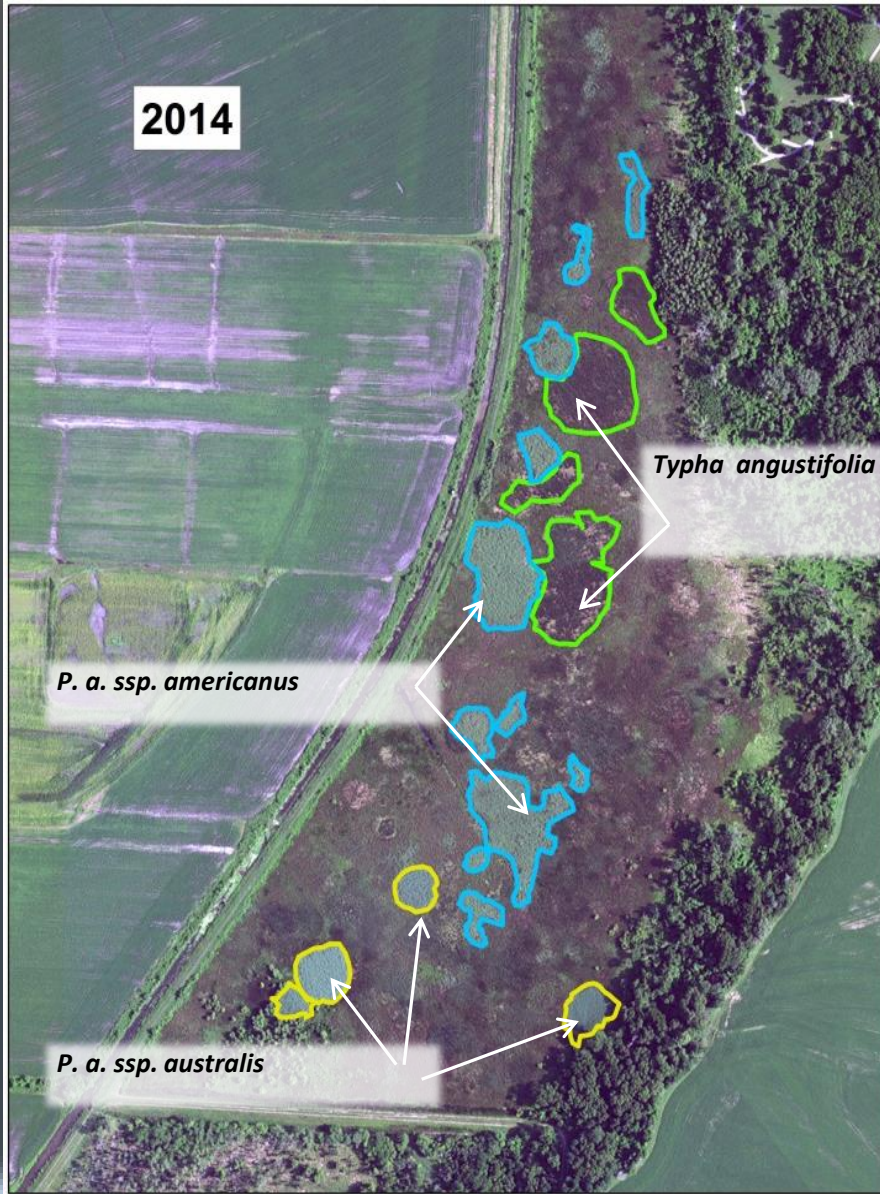
Uses: Monitoring karst resources



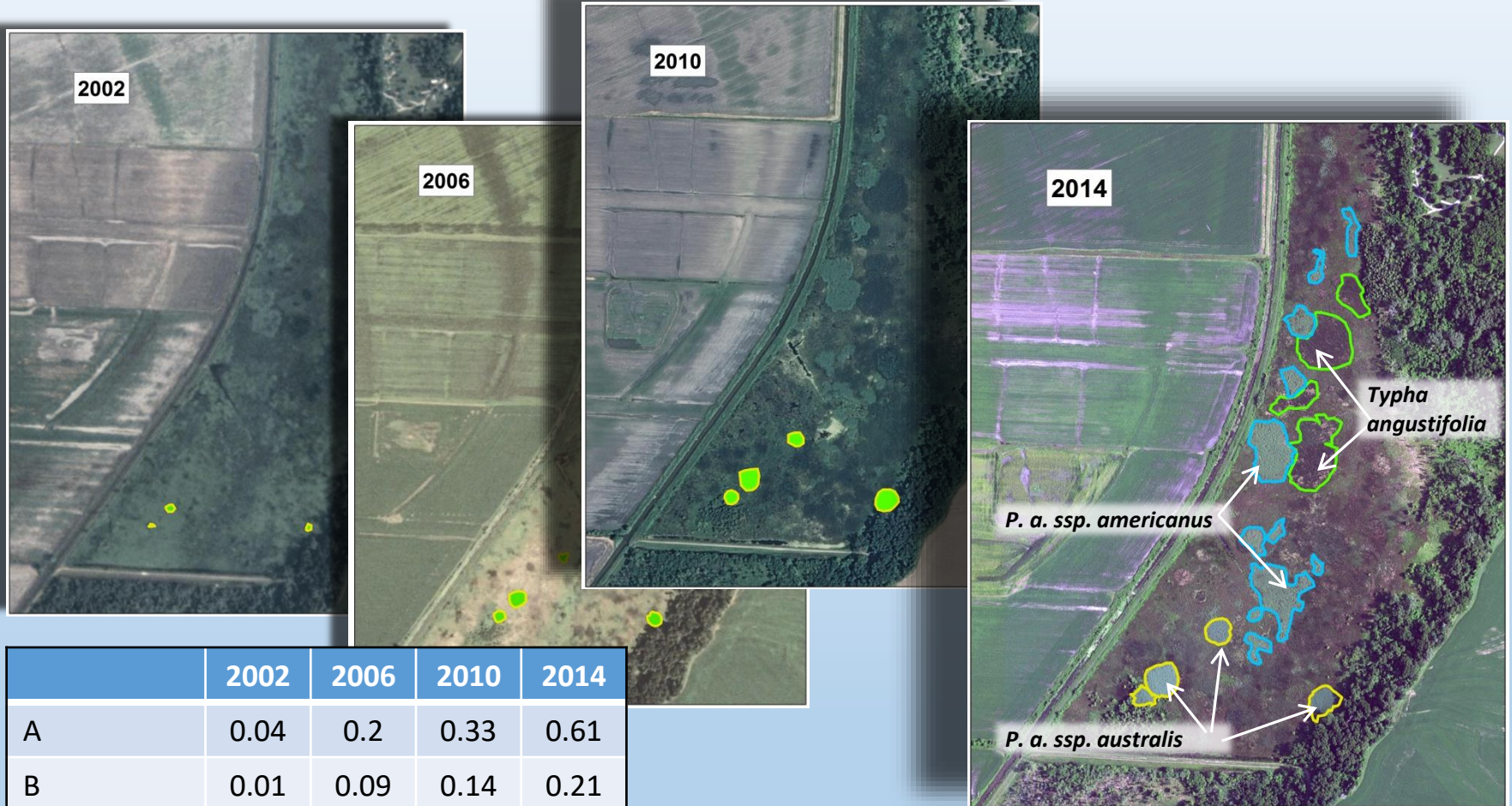
Uses: Invasive Species



Uses: Invasive Species



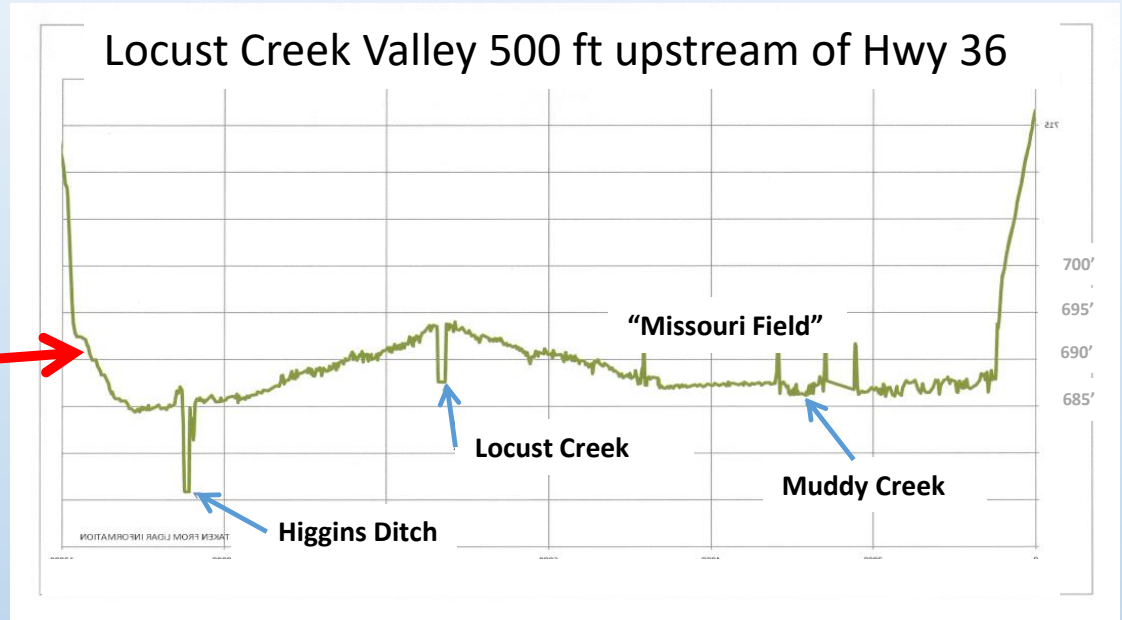
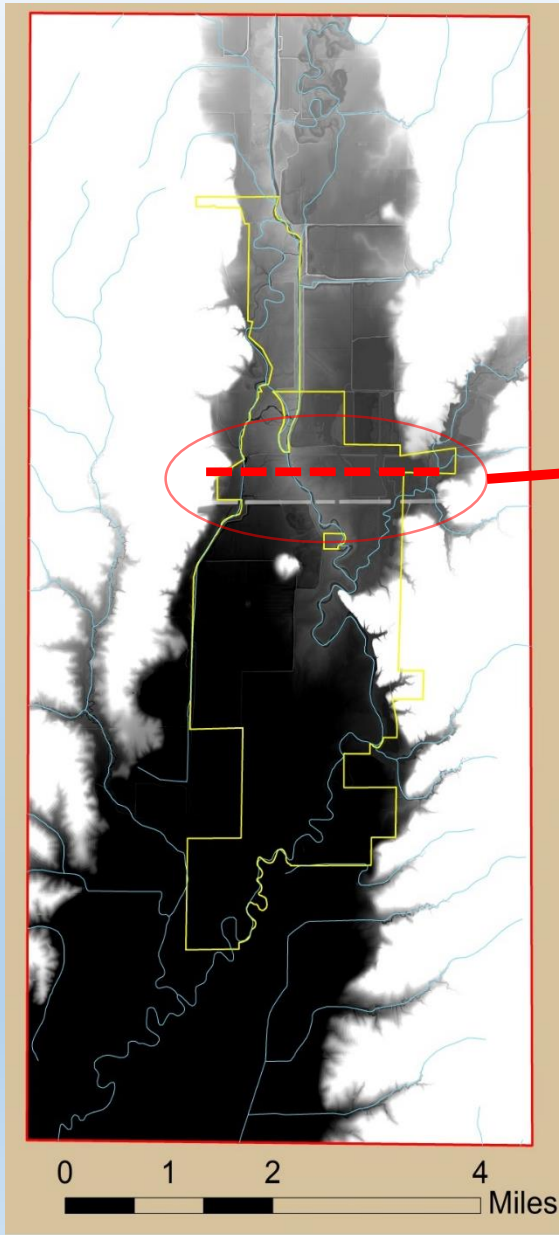
Uses: Invasive Species



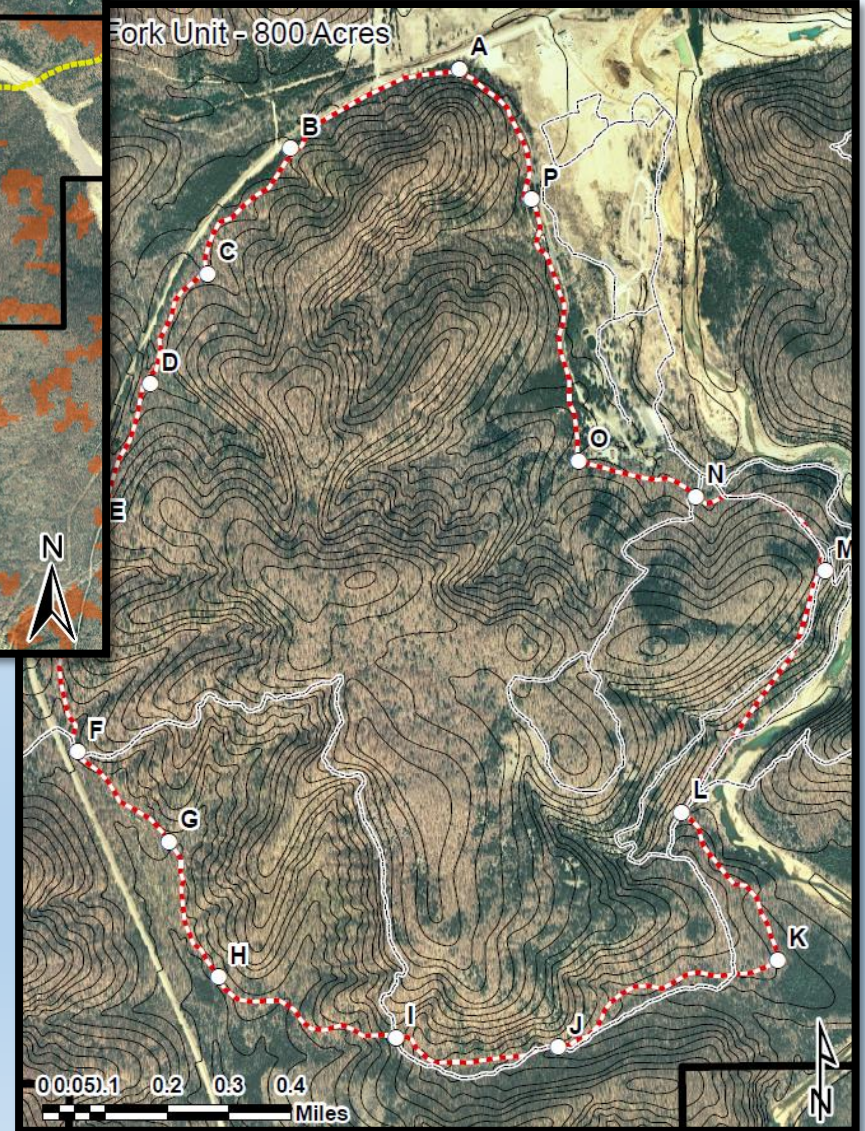
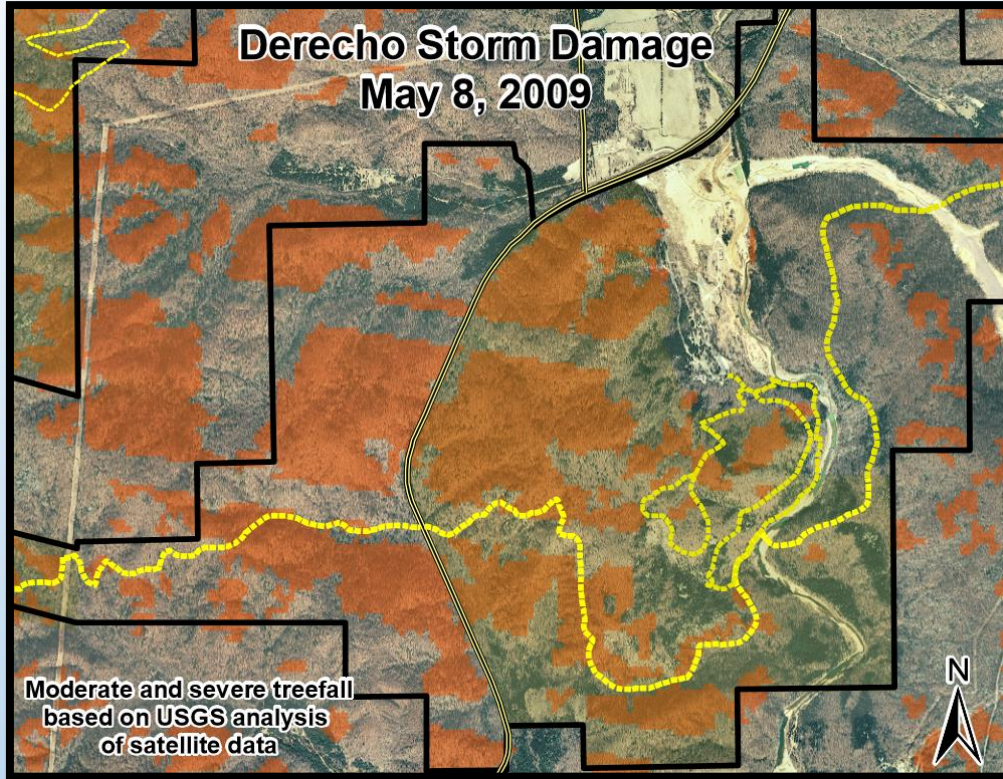
	2002	2006	2010	2014
A	0.04	0.2	0.33	0.61
B	0.01	0.09	0.14	0.21
C	0.02	0.14	0.38	0.49
D	-	0.05	0.16	0.35
Total Acres	0.07	0.48	1.01	1.66

Phragmites australis ssp. australis

Uses: Assessing resource damage



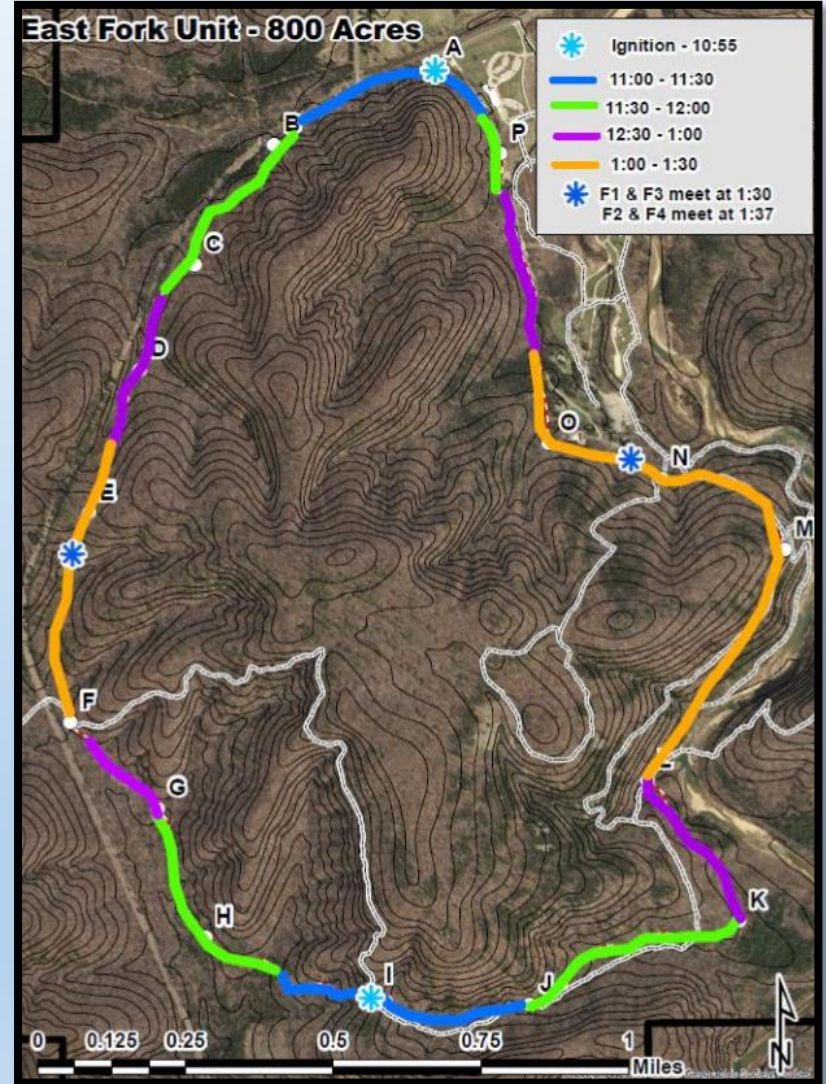
Uses: Assessing resource damage



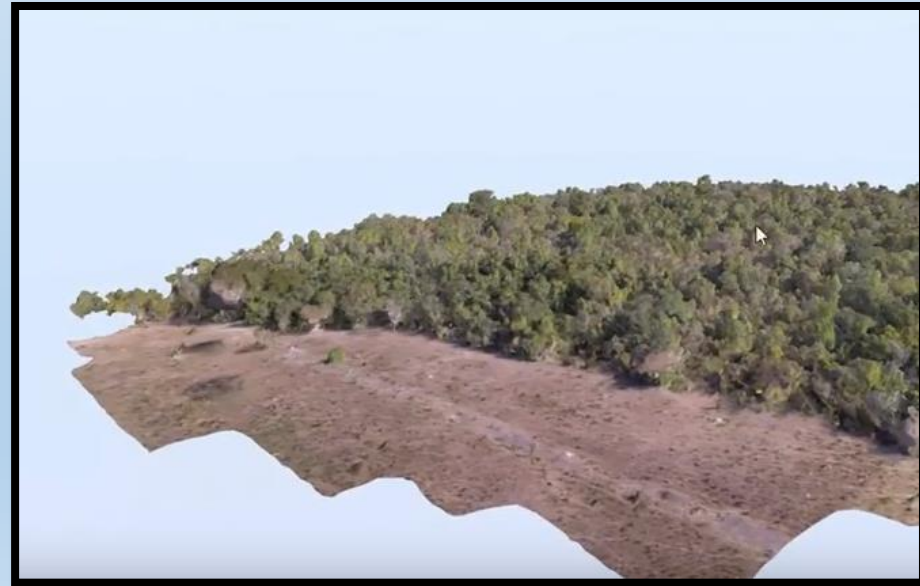
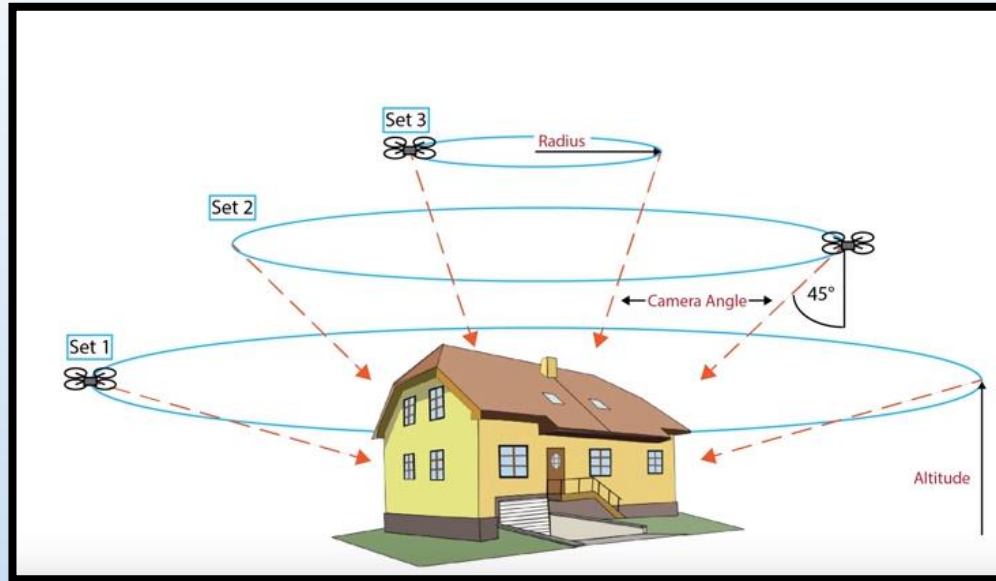
Developing technology



Developing technology



Developing technology





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