

A Very Brief Presentation on Wind in Arkansas

Arkansas Legislature: Task Force on Sustainable Building Design, May 14, 2012

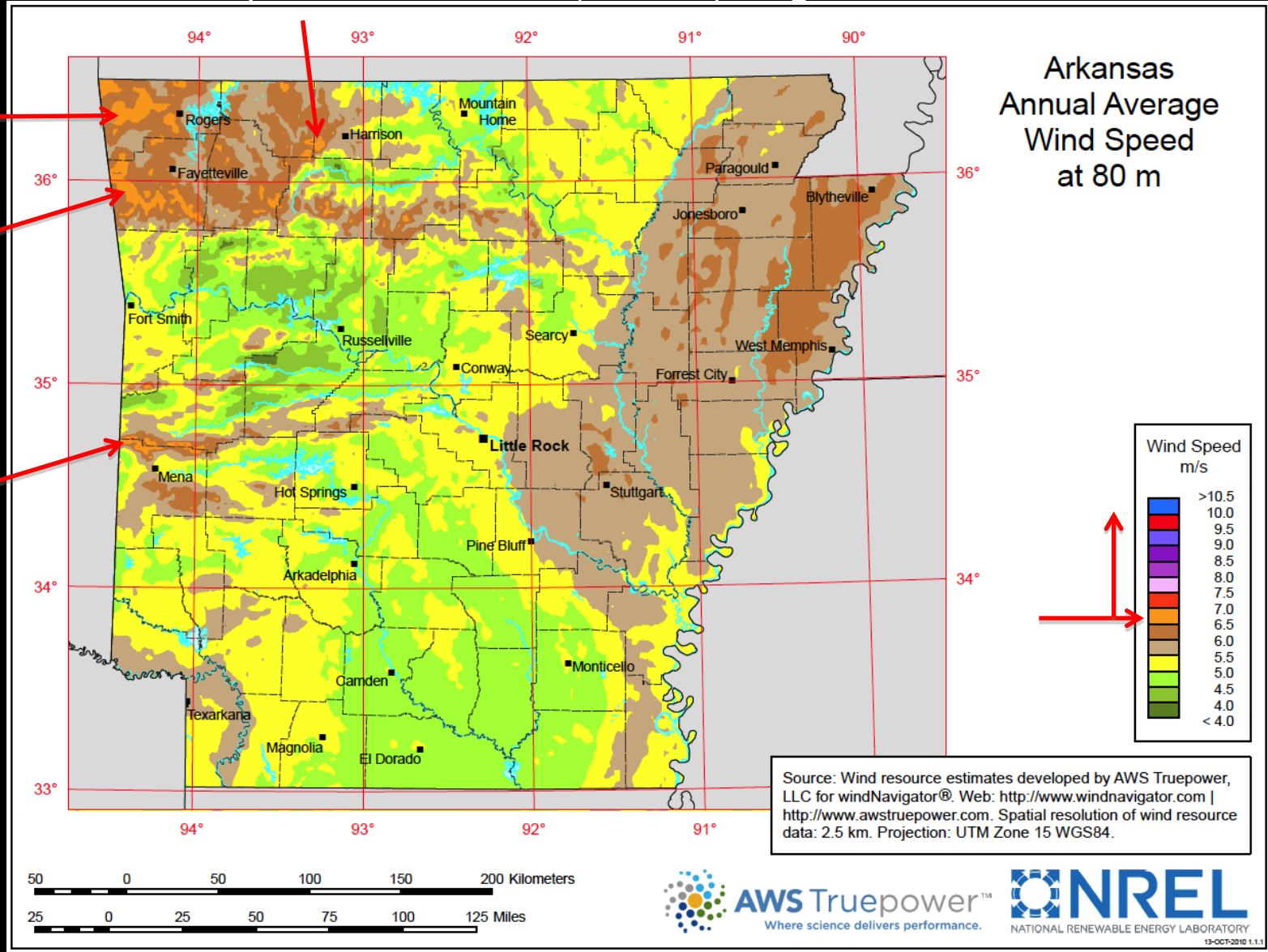
Terry Tremwel, PhD, MBA
Stephan Pollard, PhD-Environmental Dynamics, CGPM

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(E) N E R G Y + (E) N V I R O N M E N T
GREEN BUILDING WIND SOLAR SUSTAINABILITY

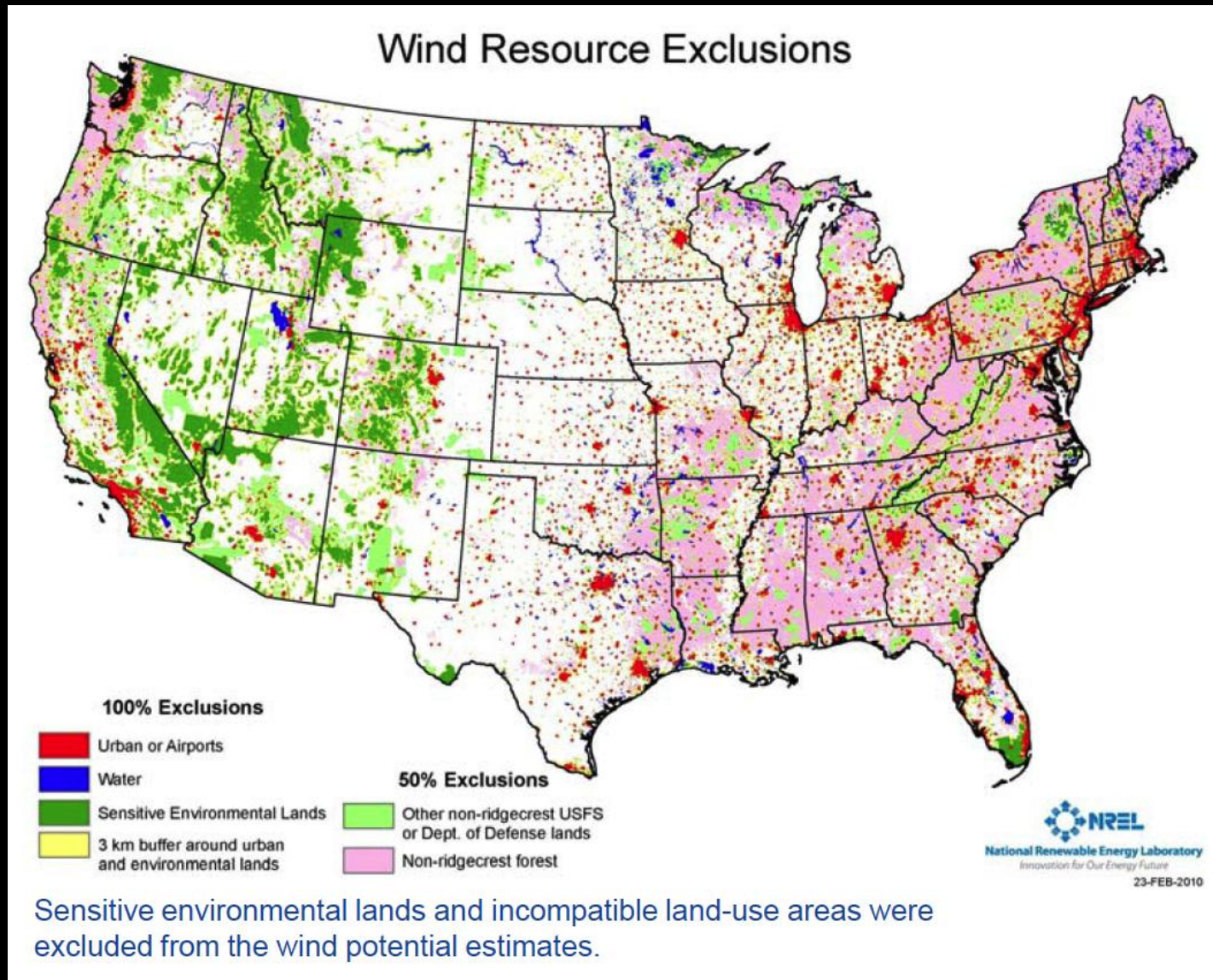
Current Wind Resource Data Northwest Arkansas

Average Annual Wind Speed at 80 meters (262.5 ft) height in MPH



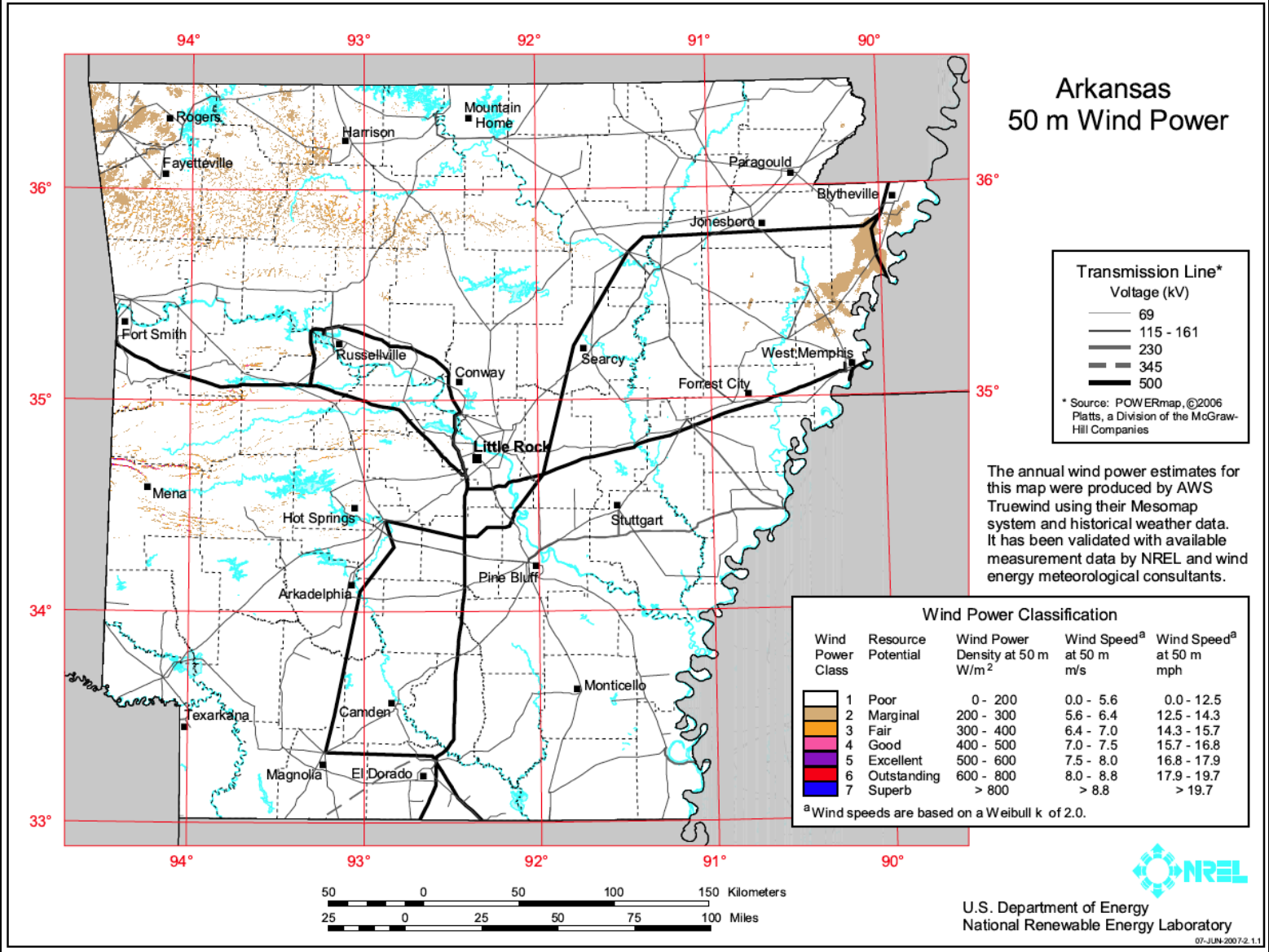
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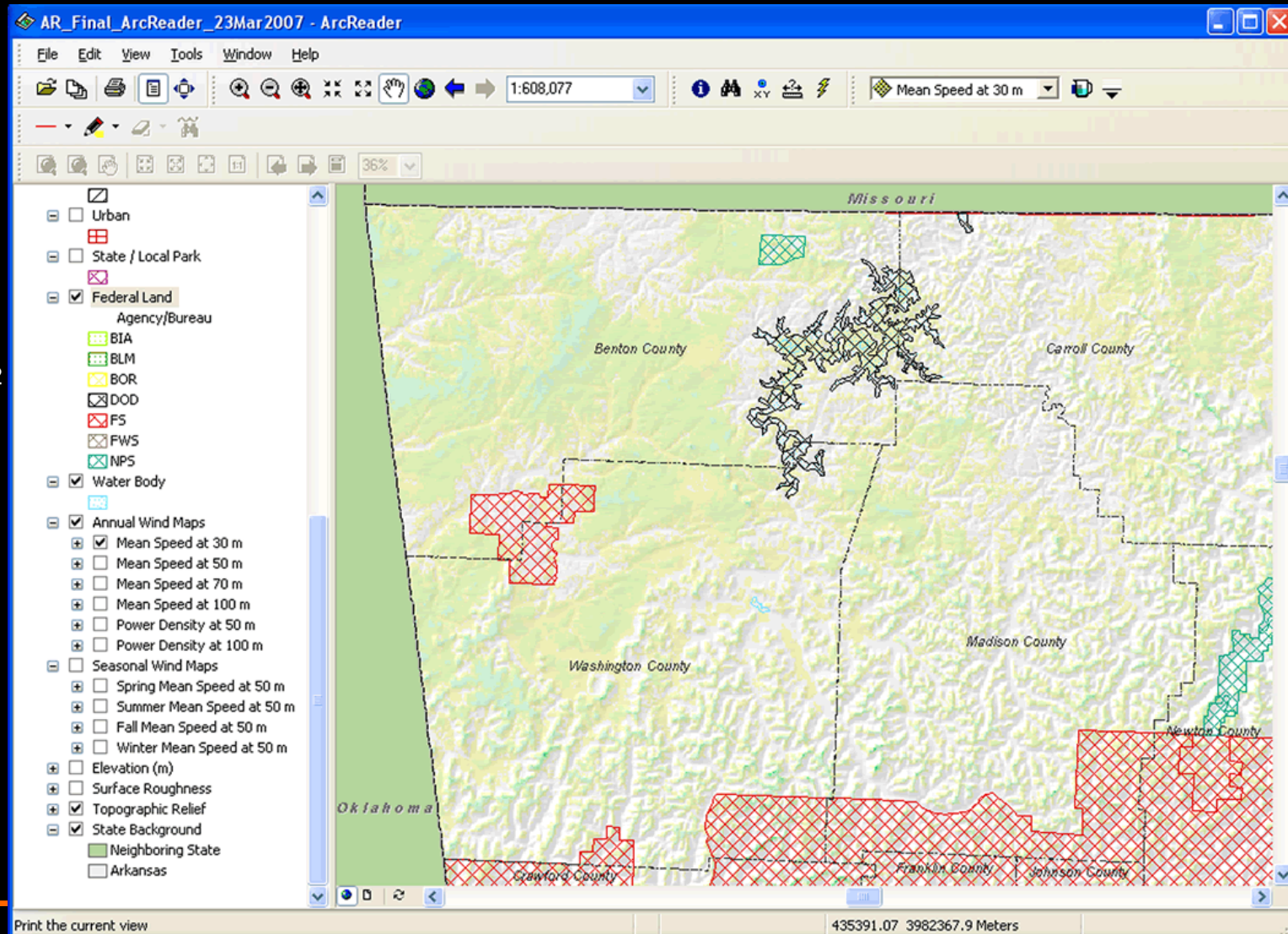
Average Annual Wind Speed at 50 meters (164 ft) height in MPH



Current Wind Resource Data Northwest Arkansas

Average Annual Wind Speed at 30 meters (98.4 ft) height in MPH

White: < 10.1
Yellow: 10.1 to 11.2
Light Green: 11.2 to 12.3
Turquoise: 12.3 to 13.4



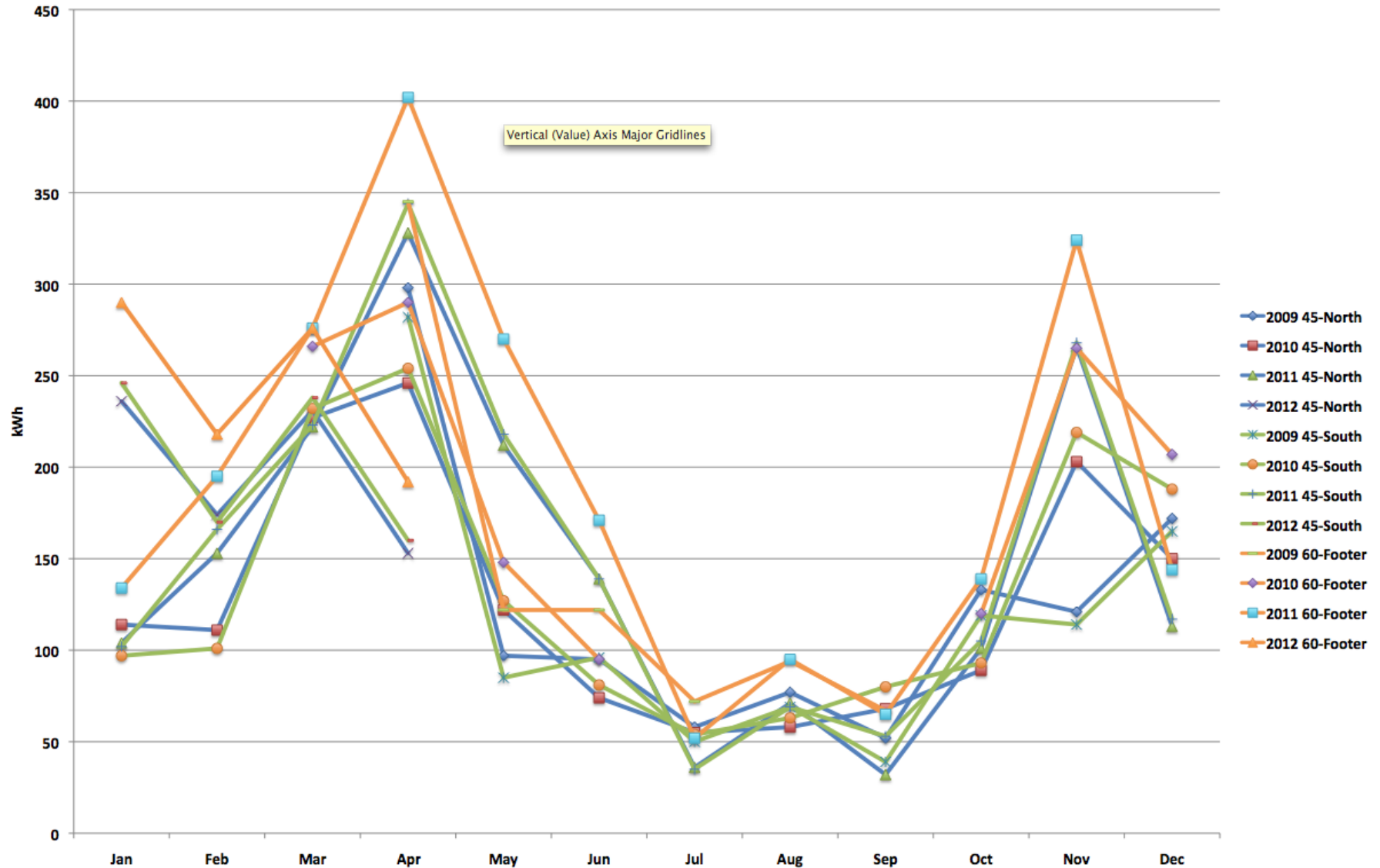
“Trinity Wind Test Project”

Church – Springdale, AR

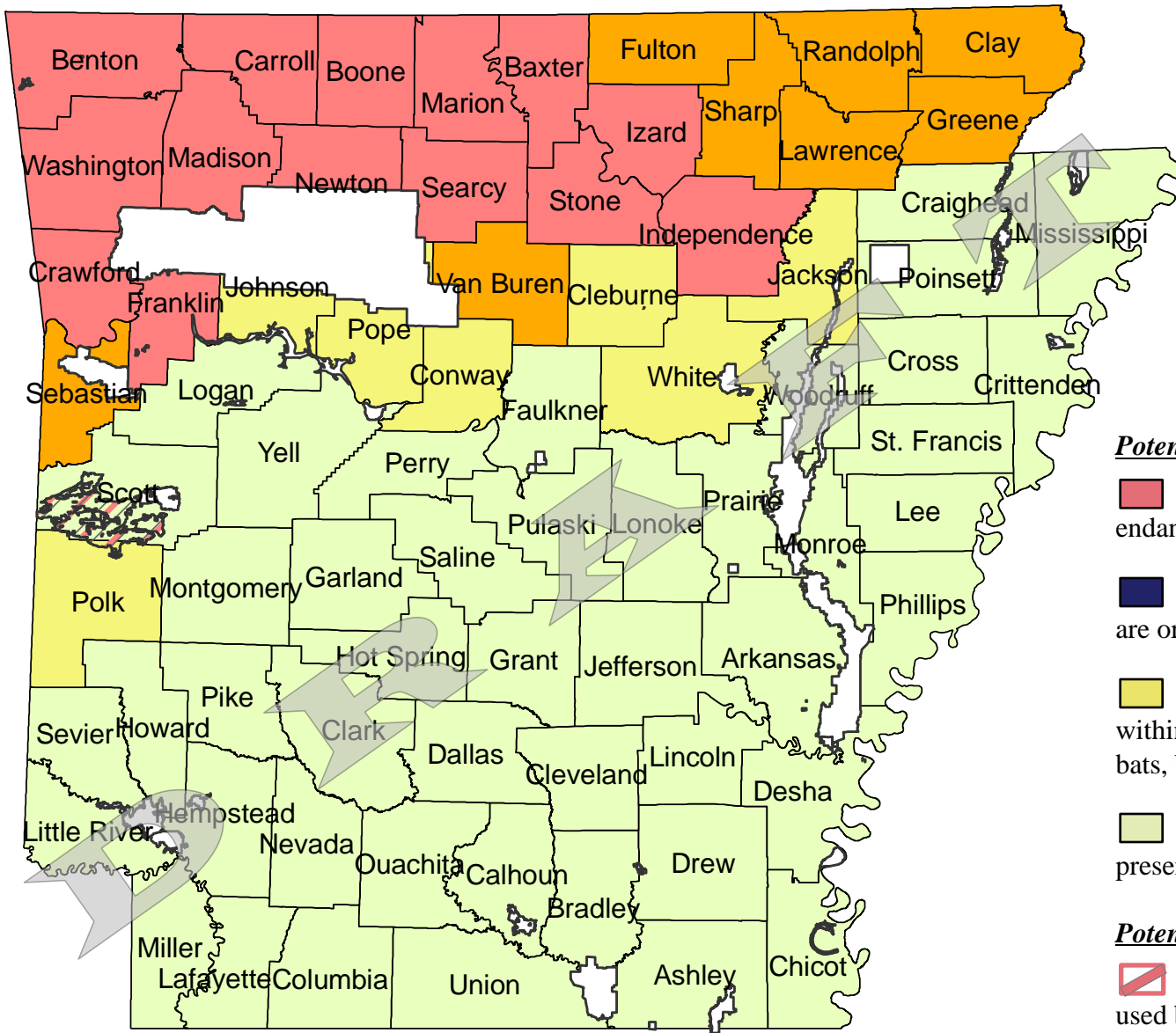


“Trinity Wind Test Project”

Church – Springdale, AR



Potential Risk to Endangered Bats and Migratory Birds from Wind Farms



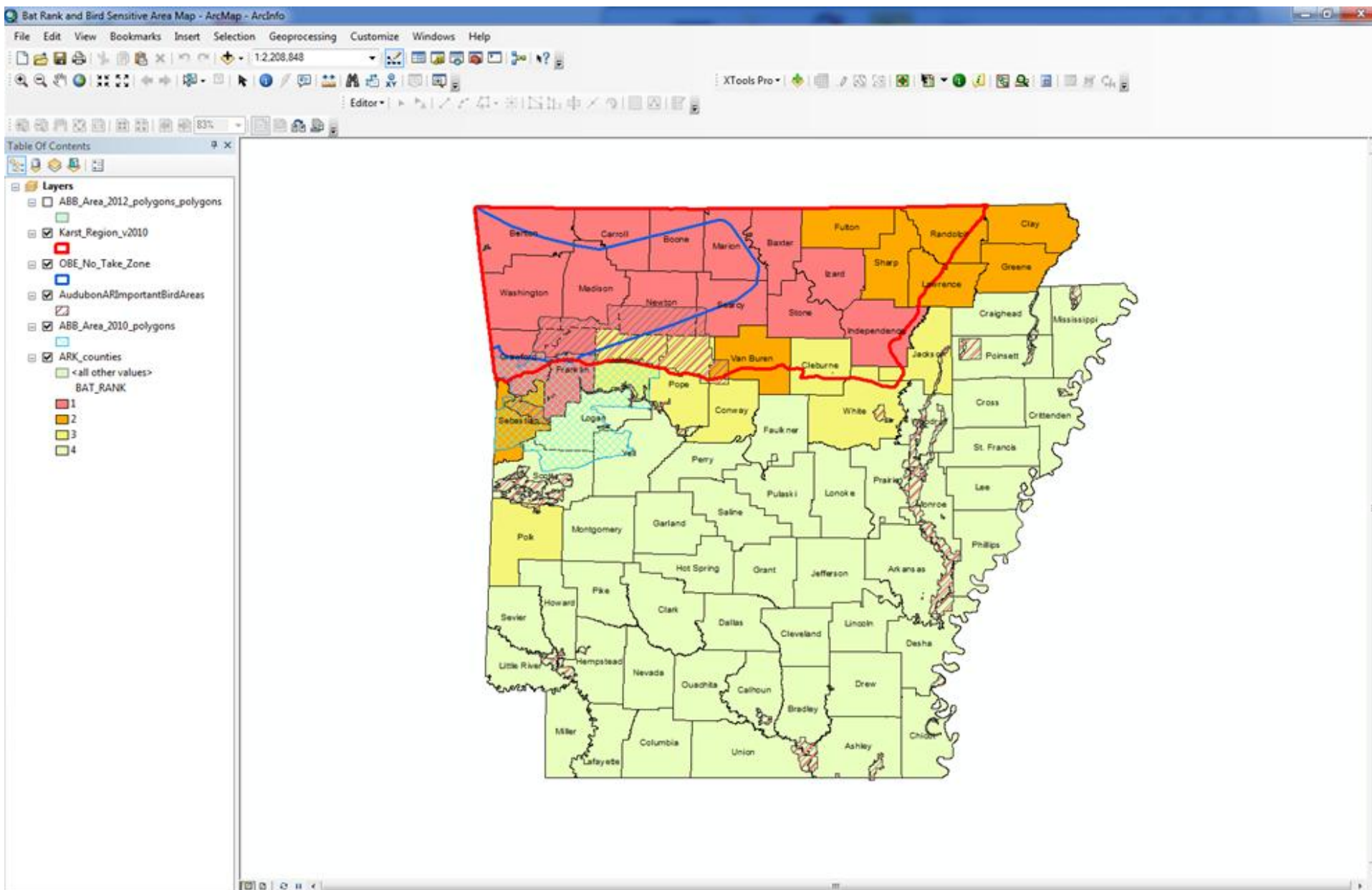
Potential Risk: BATS

- **High** - Important caves used by endangered bats are present in this county
- **Moderate-High** - Endangered bats are or have been present in this county
- **Moderate** - These counties are within the potential range of endangered bats, but none have been documented
- **Low** - No known or predicted presence of endangered bats

Potential Risk: BIRDS

- ▨ **High** - Important known habitat used by local and migratory birds

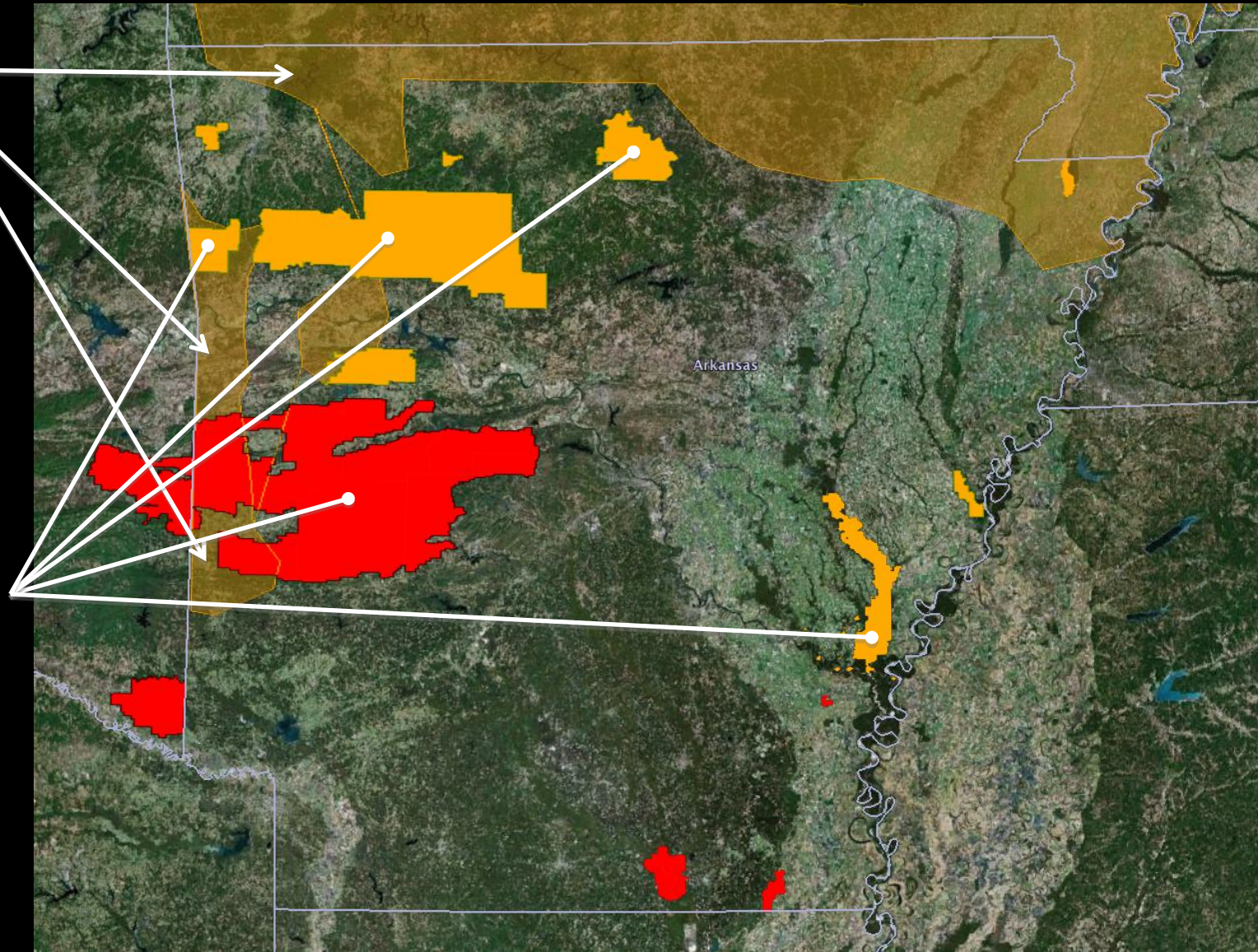
NOTE: The map above depicts *potential* risk (due to construction of wind farms) for endangered bats (by county) as well as local and migratory birds (known habitat areas). Proposed construction in a high risk county or known bird use area does not signify automatic rejection of a project. Each project must be assessed individually.



American Bird Conservancy's Wind Development Bird Risk Map

Bald Eagle
Key Habitat
Area

Birdlife International's
Important Bird Areas
•Wildlife Refuges
•National Forests



U.S. Fish and Wildlife Service

- Ozark Big Eared Bat –
 - Very small habitat
 - Maybe 1,800 in AR
 - No Incidental Take Permits
 - Indiana Bat
 - Grey Bat
 - American Burying Beetle
 - Affected by ground disturbance
 - Migratory Birds
 - Mississippi Flyway – known
 - Other Flyways - unknown
 - Looking at potential impacts of small turbines on bats
 - Dr. Tom Risch & Philip Jordan – AR State Univ
 - 3 sites in karst regions
 - Springdale, AR
 - Prairie Grove, AR
 - Ponca, AR
 - 3 sites in non-karst
 - Newport, AR
 - Burdette, AR
 - Fair Oaks, AR
 - Bat Studies
 - Acoustic call collection
 - Anabat (brand name for acoustic tech)
 - Mist netting
 - Transects
-
- Federal nexus project
 - Needs to know
 - Non-Federal nexus project
 - Wants to know
 - Risk of potential prosecution
 - Endangered Species Act
 - Migratory Bird Act

U.S. Fish and Wildlife Service

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Terry Tremwel, PhD, MBA

Stephan Pollard, PhD, CGPM



(479) 414.0956

(479) 799.9190

1924 Lee Creek Drive
Van Buren, AR 72956

1764 N. Leverett Ave., Apt. 161
Fayetteville, AR 72703

Terry.Tremwel@trem-wel.com Stephan.Pollard@trem-wel.com
