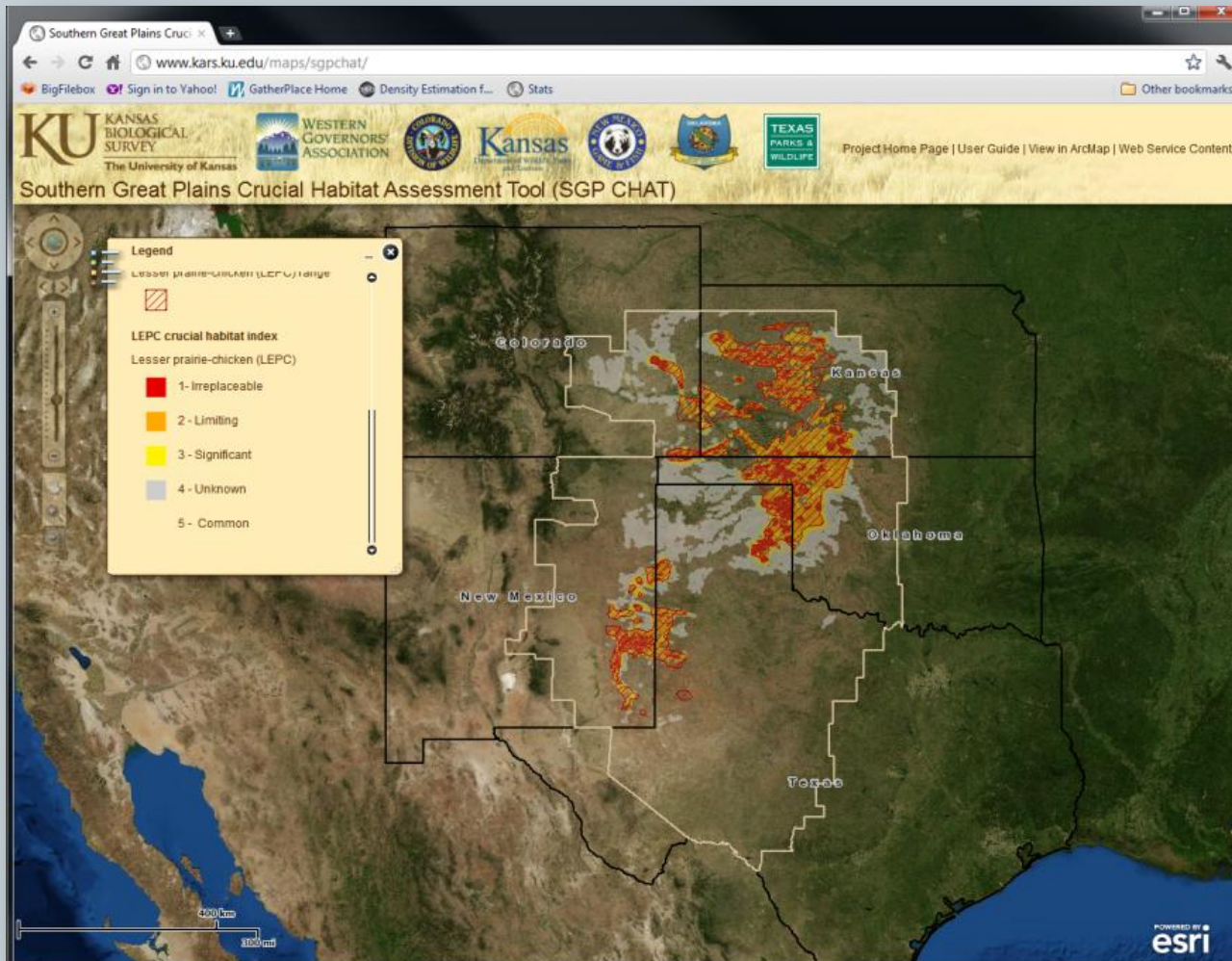


Southern Great Plains CHAT: A Decision Support System for Lesser Prairie-Chicken



What is the CHAT?



- **Crucial Habitat Assessment Tool for LEPC**
 - Geospatial tool (map) that identifies LEPC habitat
 - Focus on guiding energy development
 - Meant as 1st step tool for developers to assess landscape
 - ✦ 2nd step to engage State Wildlife Agency
 - General conservation objective: identify crucial habitat
 - First time for a range-wide, consistent approach

Who developed the CHAT?



- **Funded by Western Governors Association, State Wildlife Agencies**
- **Developed by 5 state wildlife agencies in LEPC range**
 - ODWC and KDWPT lead agencies
 - USGS developed Maximum Entropy model
 - PLJV facilitated development team, conduct GIS Analysis
- **Year 1 – LEPC Decision Support Tool (DSS)**
 - version 2 likely in 12-18 months
- **Year 2 – WGA product: multi- Species DSS**

CHAT Maps Habitat by Categories



- CHAT defines habitat into 4 categories
 1. Irreplaceable
 2. Limiting
 3. Significant
 4. Significance Unknown
- Categories are 'fuzzy'
 - Depend on multiple factors
 - ✦ Landcover, fragmentation, distance to leks, etc
 - ✦ Native rangeland can occur in categories 1, 2, or 3

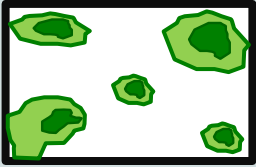


Factors for Habitat Categories

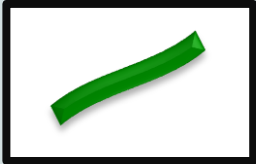
Step 1:
Develop & Integrate
4 Habitat Models

Step 2:
Develop & Integrate
3 Prioritization Zones

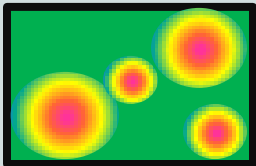
Habitat Patches



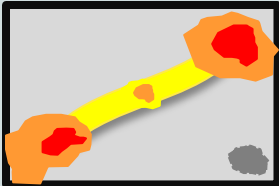
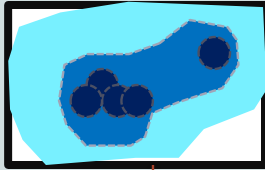
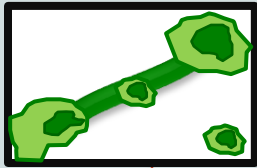
Corridors



Lek Probability
Gradient

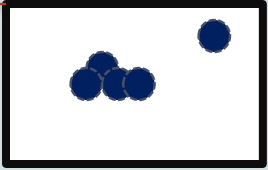


Step 3:
Apply Crucial Habitat
Definitions

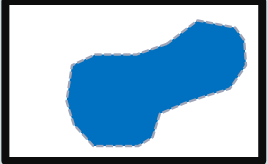


- 1 – Irreplaceable
- 2 – Limiting
- 3 – Significant
- 4 – Unknown

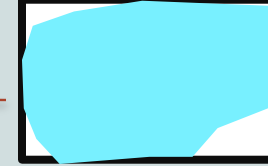
5-mile Buffer of Leks



Estimated
Occupied Range



5-mile Buffer of Estimated
Occupied Range



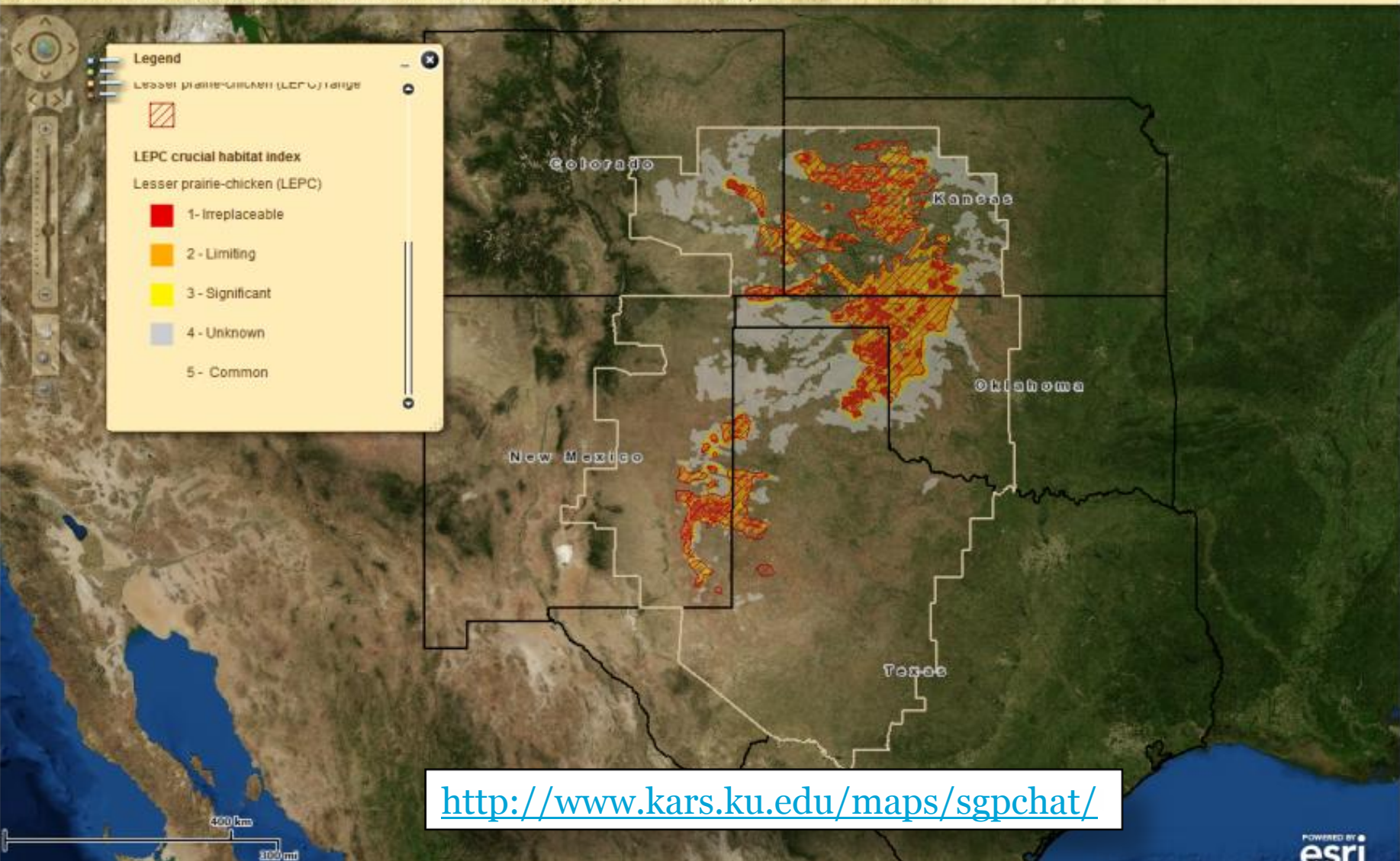
Crucial Habitat Categories



CHD Category	WGA CHD Category Desc	CHD Sub-category	CHD Sub-category Description	Core Patch or Buffer (0, 1, 2)	MaxEnt High Prob (0,1)	Inside 5mi buff of leks (0,1)	Inside EOR (0,1)	Inside 5 mi buff of EOR (0,1)
1	Irreplaceable	1a	Core, maxent, in 5-mile lek buffer in EOR	1	1	1	1	0
1	Irreplaceable	1b	Core, no maxent, in 5-mile lek buffer in EOR	1	0	1	1	0
2	Limiting	2a	Core, maxent, in EOR (outside 5-mile lek buffer)	1	1	0	1	0
2	Limiting	2b	Core, no maxent, in EOR (outside 5-mile lek buffer)	1	0	0	1	0
2	Limiting	2c	Core, maxent, in 5-mile lek buffer, out of EOR but in 5 miles of EOR	1	1	1	0	1
2	Limiting	2d	Core, no maxent, in 5-mile lek buffer, out of EOR but in 5 miles of EOR	2	0	1	0	1
2	Limiting	2e	Core buffer, maxent, in 5-mile lek buffer, in EOR	2	1	1	1	0
2	Limiting	2f	Pseudo patch, in EOR (in or outside of 5-mile lek buffer)	0	0/1	0/1	0/1	0/1
3	Significant	3a	Core, maxent, out of EOR but in 5 mile buffer	1	1	0	0	1
3	Significant	3b	Core, no maxent, out of EOR but in 5 mile buffer	1	0	0	0	1
3	Significant	3c	Core buffer, maxent, in EOR (outside 5-mile lek buffer)	2	1	0	1	0
3	Significant	3d	Core buffer, maxent, in 5-mile lek buffer, out of EOR but in 5 miles of EOR	2	1	1	0	1
3	Significant	3e	Corridor	n/a	n/a	n/a	n/a	n/a
4	Unknown	4a	Core, maxent, out of EOR and out of 5 mile buffer	1	1	0	0	0
4	Unknown	4b	Core buffer, maxent, in 5-mile buffer of EOR	2	1	0	0	1
4	Unknown	4c	Core buffer, maxent, out of 5-mile buffer of EOR	2	1	0	0	0
5	Common	5	No maxent, no core, no core buffer, no lek, no corridor	0	0	0	n/a	n/a
				0 = none	0 = low	0 = outside	0 = outside	0 = outside
				1 = patch	1 = high	1 = inside	1 = inside	1 = outside
				2 = buffer				



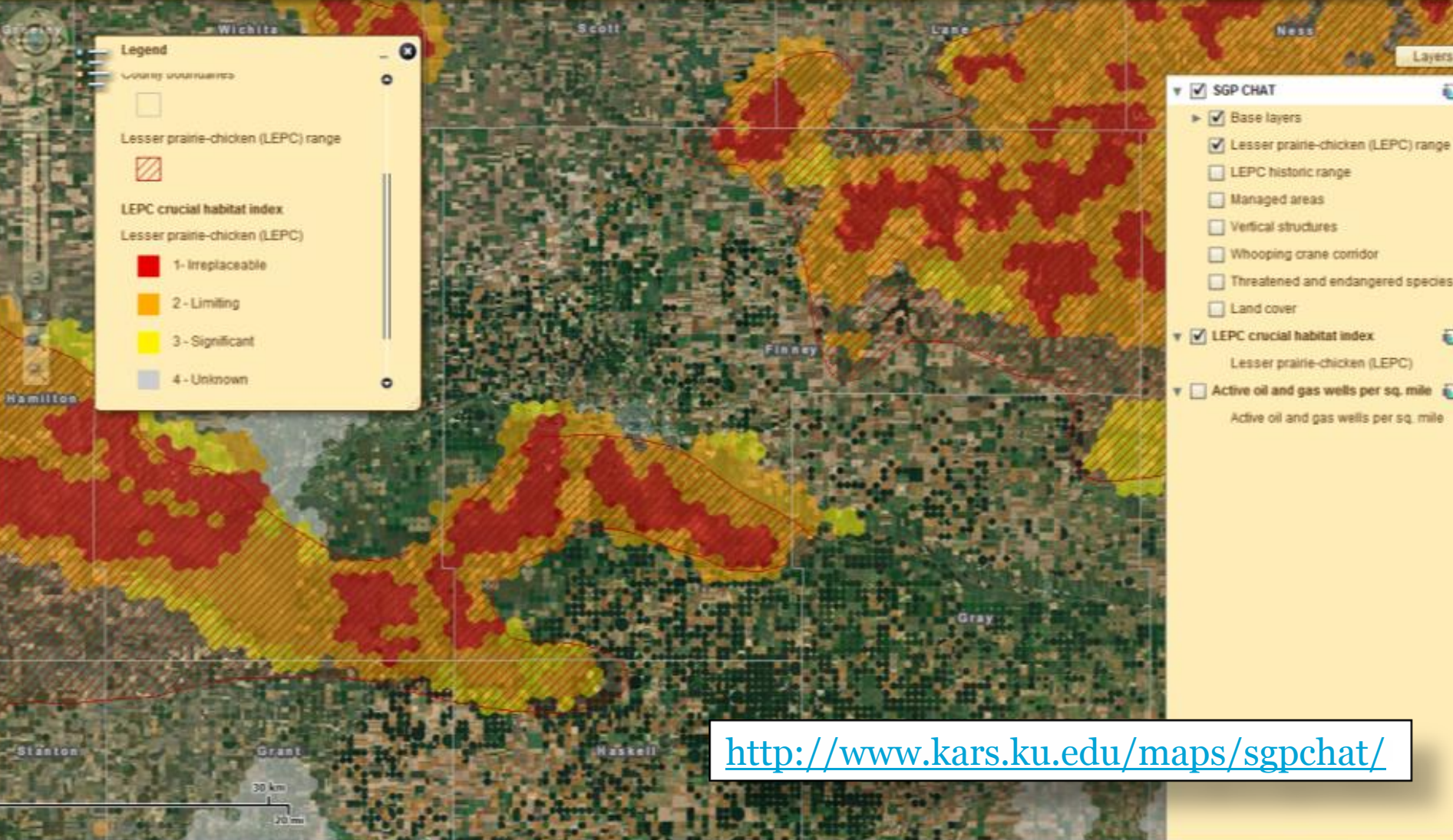
Southern Great Plains Crucial Habitat Assessment Tool (SGP CHAT)



<http://www.kars.ku.edu/maps/sgpchat/>



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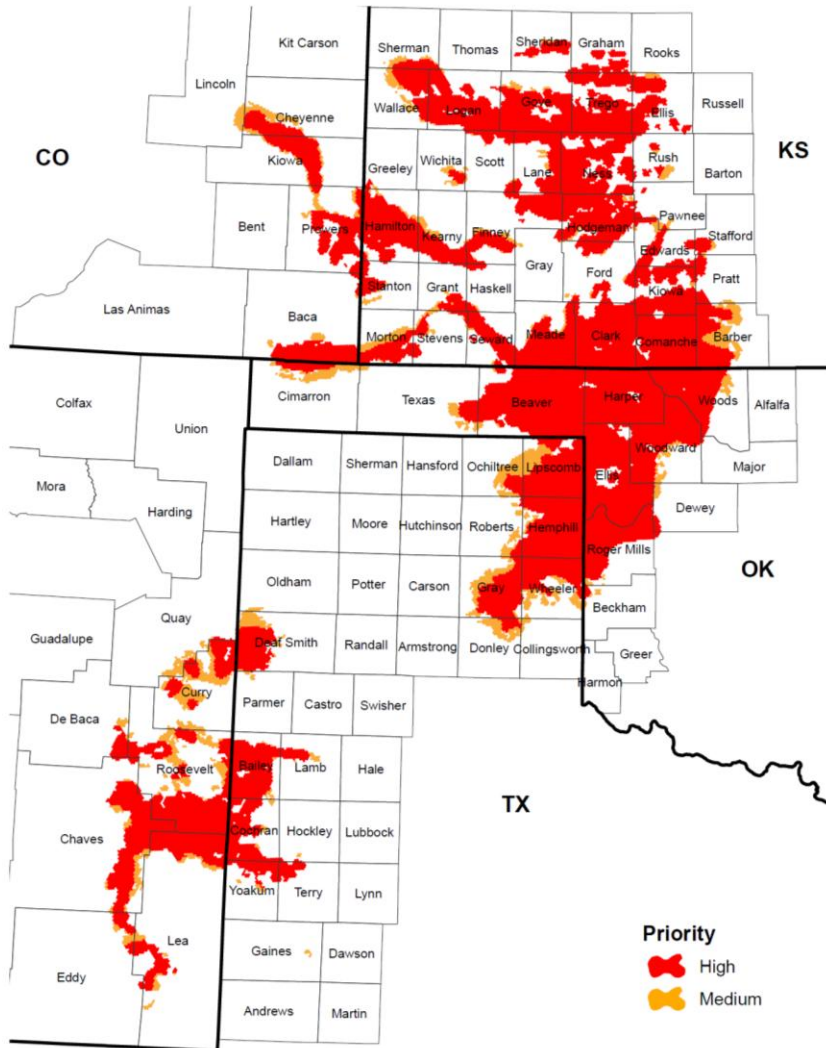
CHAT & NRCS LEPC Conservation Initiative



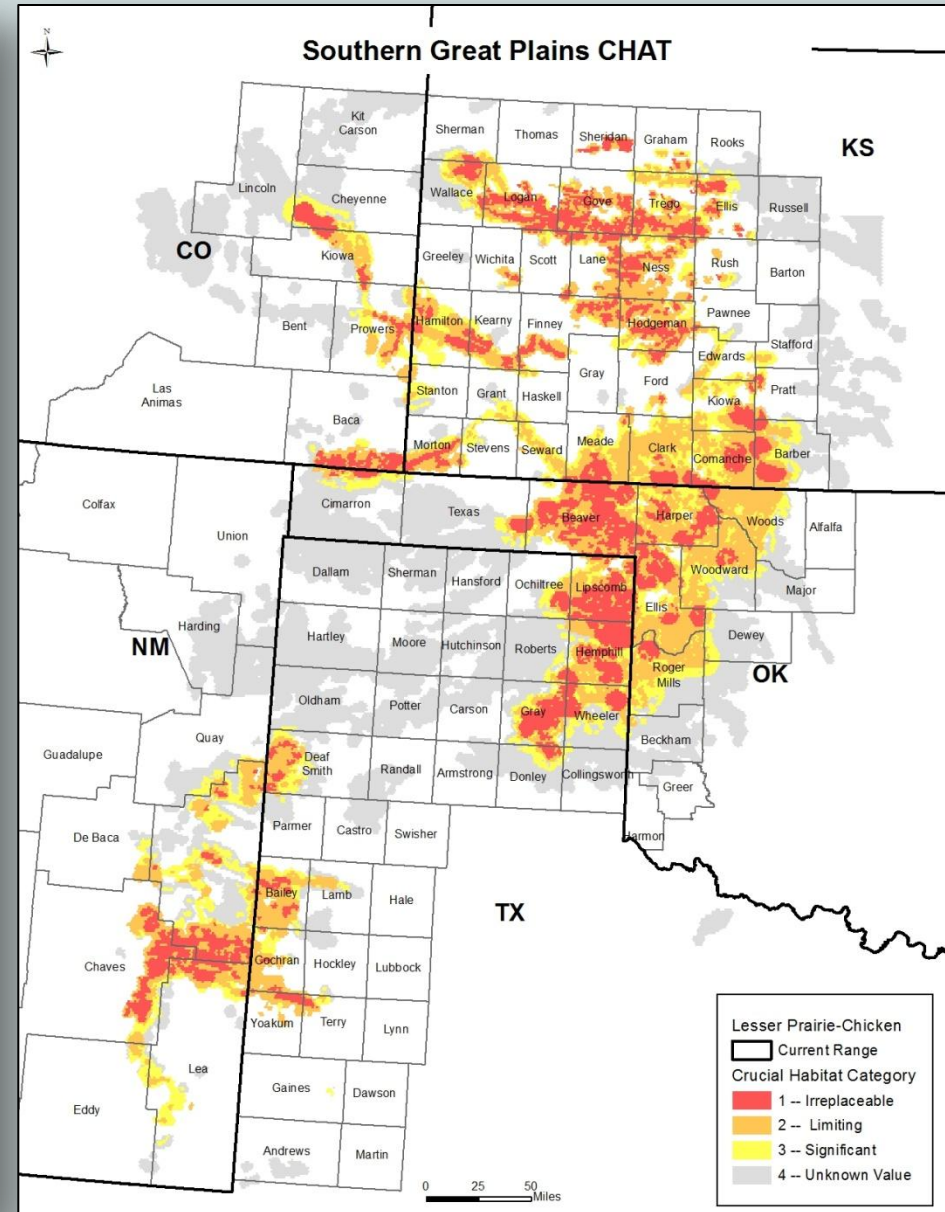
- CHAT used by NRCS to develop LCPI screening tool for applications:
 - High Priority
 - ✦ **Irreplaceable** or **Limiting** habitat in LEPC range
 - Medium Priority
 - ✦ **Irreplaceable** or **Limiting** habitat outside LEPC range
 - ✦ **Significant** habitat in LEPC range
 - ✦ Presence of LEPC

NRCS LPCI Screening Tool & CHAT

Lesser Prairie-Chicken Priority Areas 2012



Southern Great Plains CHAT



Questions?

