



# **Black-capped Vireos**

## **Results of a Reconnaissance Survey in Mason and Menard Counties**

Presented By: Jenny Blair, CWB

January 29, 2016

# TEXAS HILL COUNTRY HERITAGE ASSOCIATION

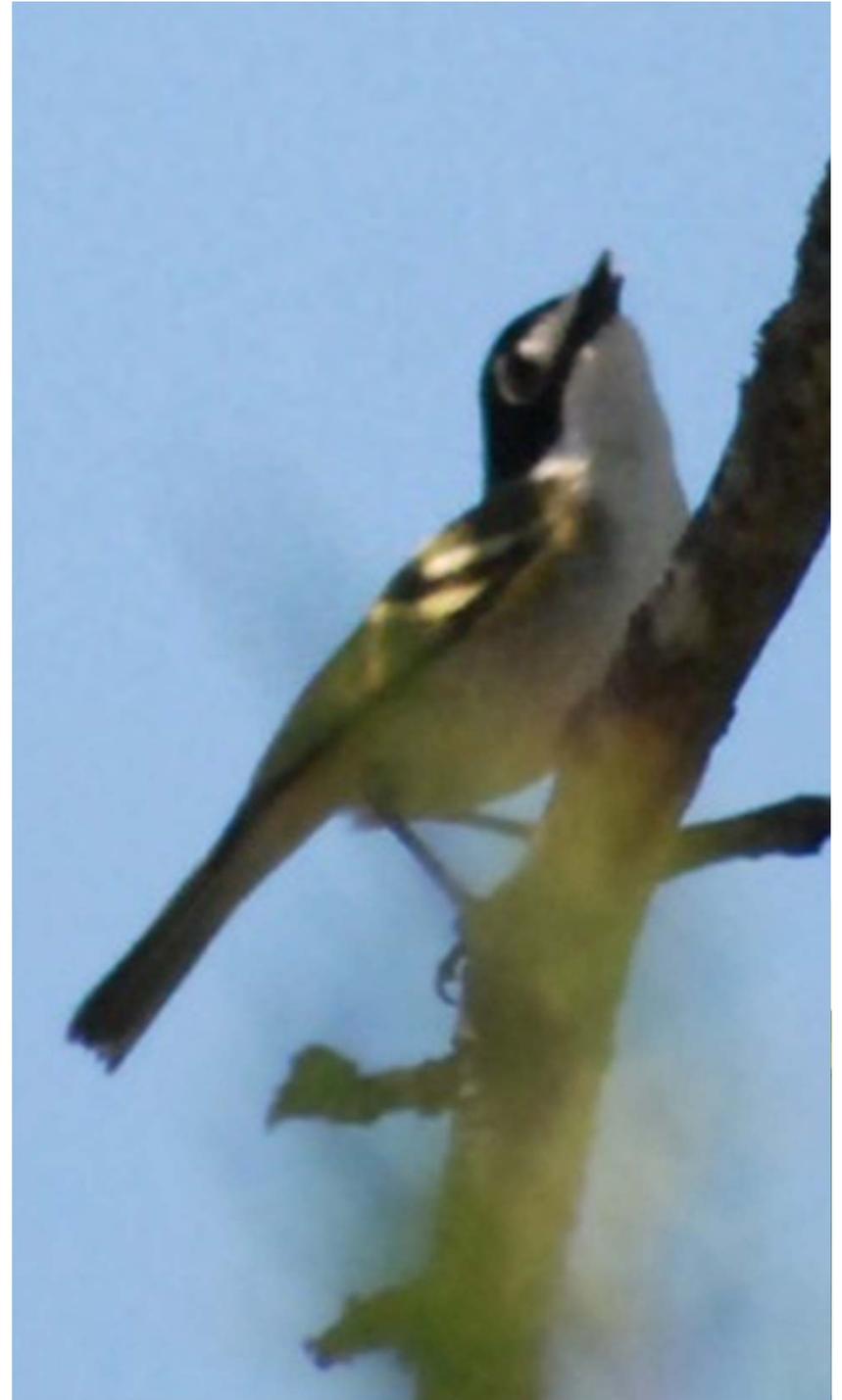


*Supporting the social welfare and economic well-being of Mason County and the surrounding Texas Hill Country*

The mission of the Texas Hill Country Heritage Association (THCHA) is to actively develop and implement strategies to protect the Texas Hill Country's heritage, property, environment and economy through research, education, publication and programs; to identify pertinent community issues; to inform the public and motivate citizens to respond; and to encourage and enhance the role of local government.

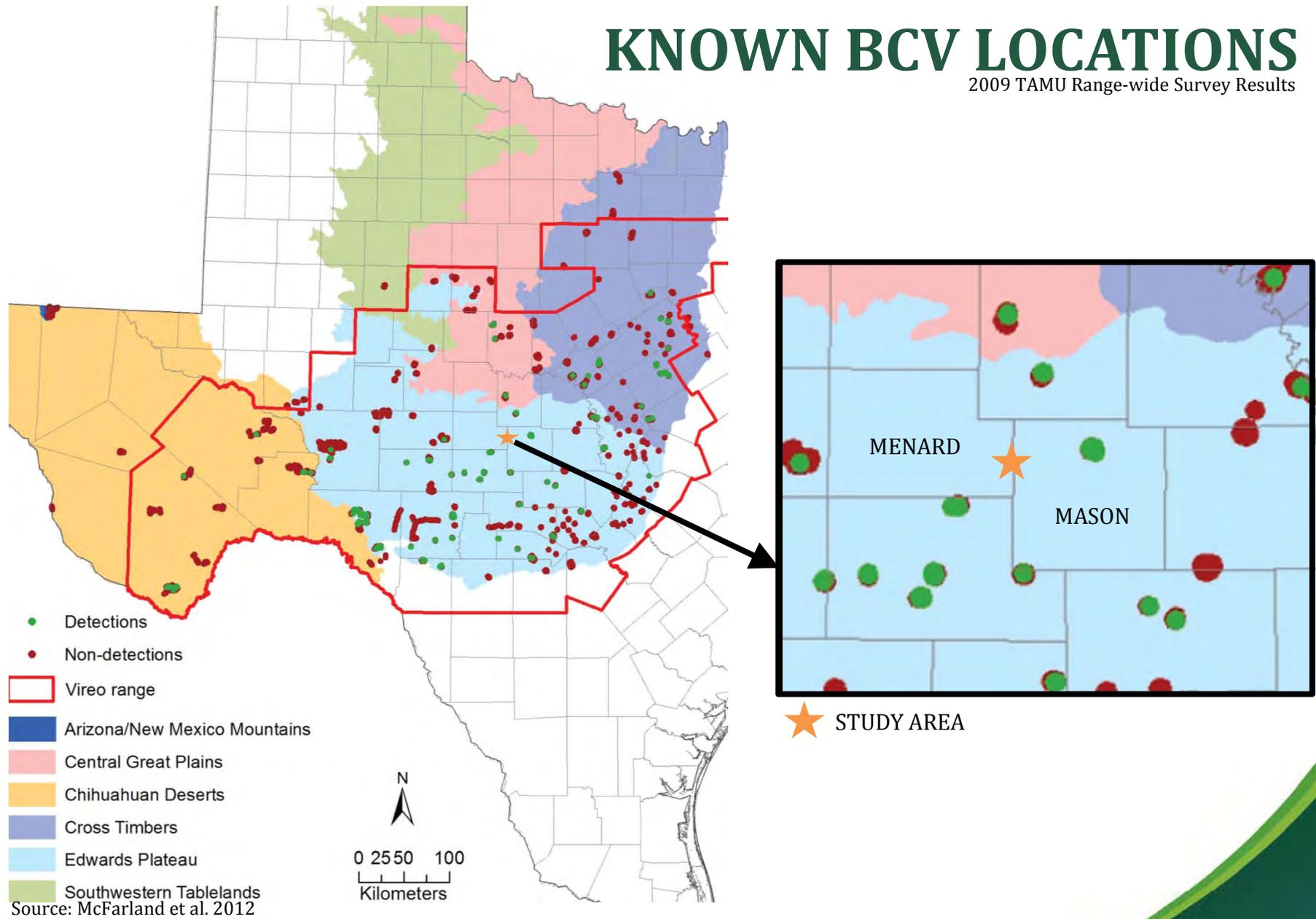
# MASON MOUNTAIN WIND PROJECT

- WHAT WE KNOW
  - Mason and Menard counties, Texas
  - Leased properties include over 14,000 acres
  - 37 turbines?



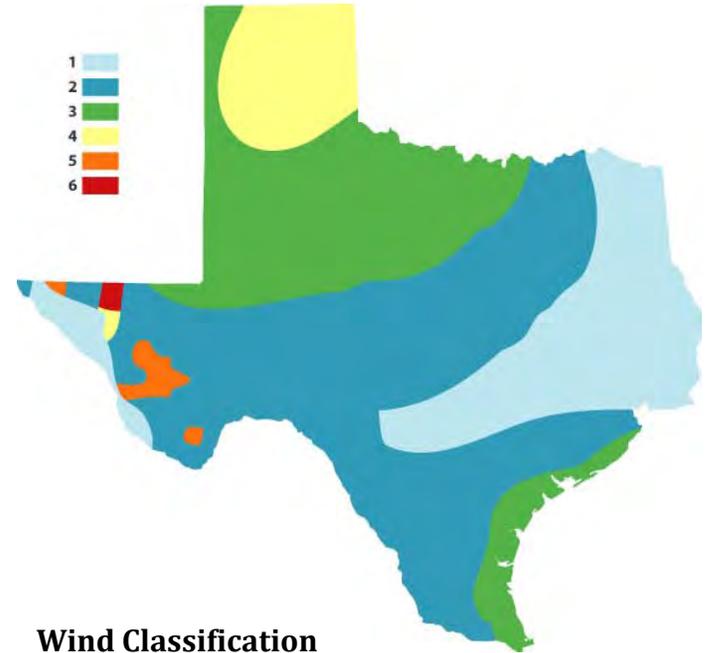
# KNOWN BCV LOCATIONS

2009 TAMU Range-wide Survey Results



# WIND ENERGY IN TEXAS

- Texas is the national leader in the wind energy industry for both installed and under construction wind capacity.
- Installed capacity 17,713 MW
- 118 projects currently online
- Over 10,403 wind turbines
- 5,026 MW capacity under construction



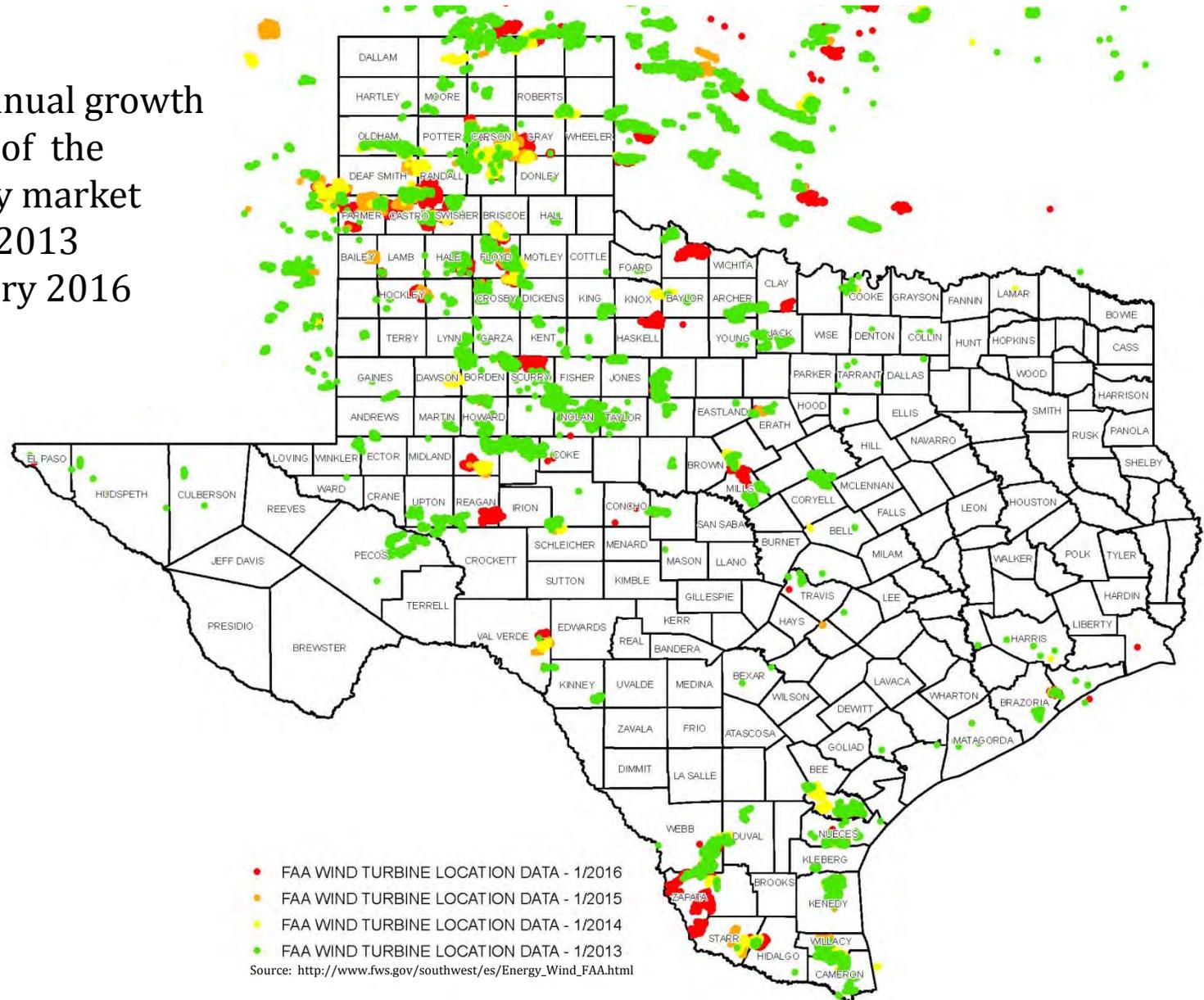
## Wind Classification

The quality of wind is ranked on a scale of 1 to 7.

Source: [seco.cpa.state.tx.us](http://seco.cpa.state.tx.us)

# WIND ENERGY IN TEXAS

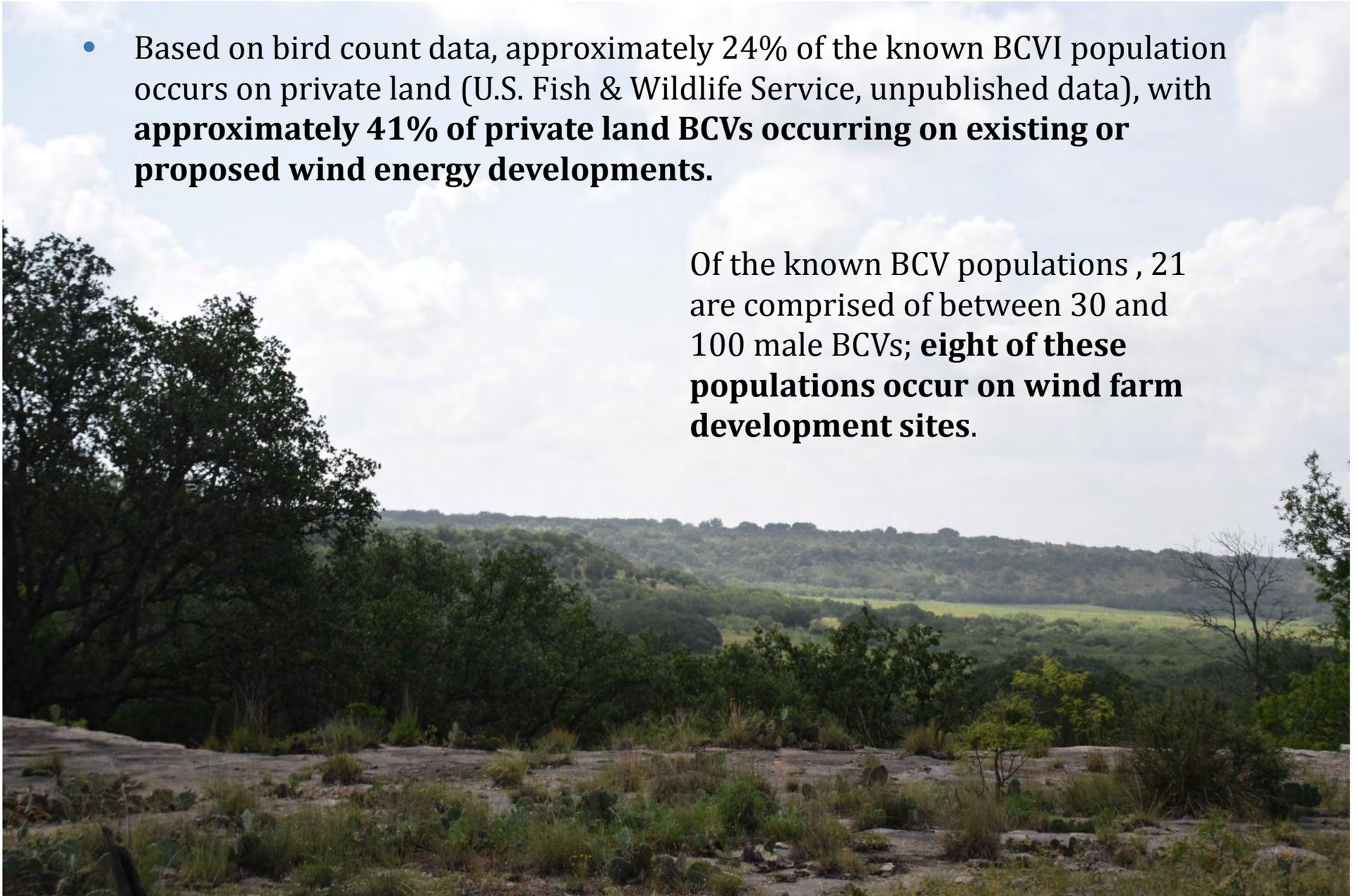
Representative annual growth and development of the Texas wind energy market between January 2013 (green) and January 2016 (red).



# WIND ENERGY AND THE BCV

- Based on bird count data, approximately 24% of the known BCVI population occurs on private land (U.S. Fish & Wildlife Service, unpublished data), with **approximately 41% of private land BCVs occurring on existing or proposed wind energy developments.**

Of the known BCV populations , 21 are comprised of between 30 and 100 male BCVs; **eight of these populations occur on wind farm development sites.**



# WIND ENERGY AND THE BCV

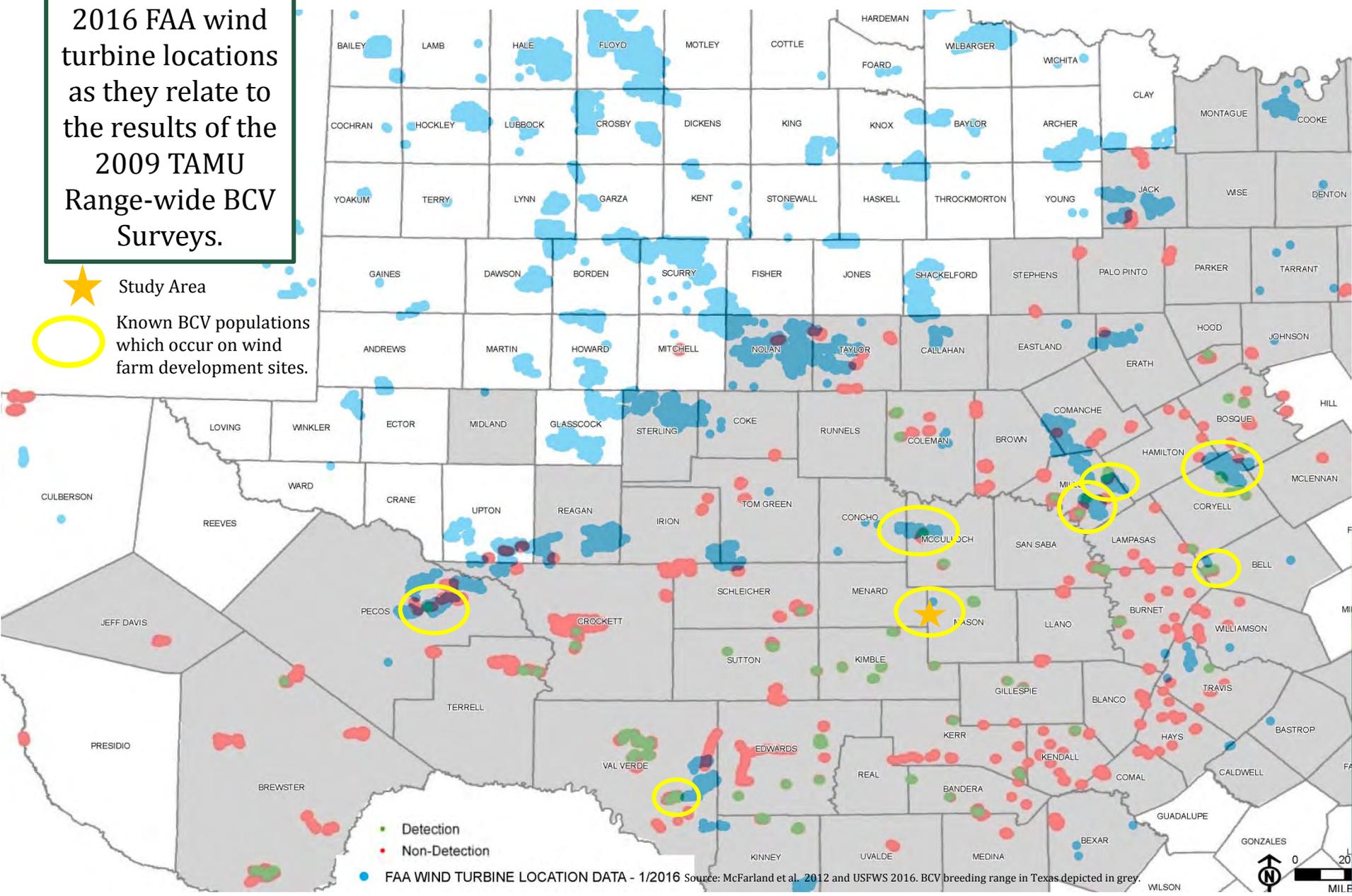
2016 FAA wind turbine locations as they relate to the results of the 2009 TAMU Range-wide BCV Surveys.



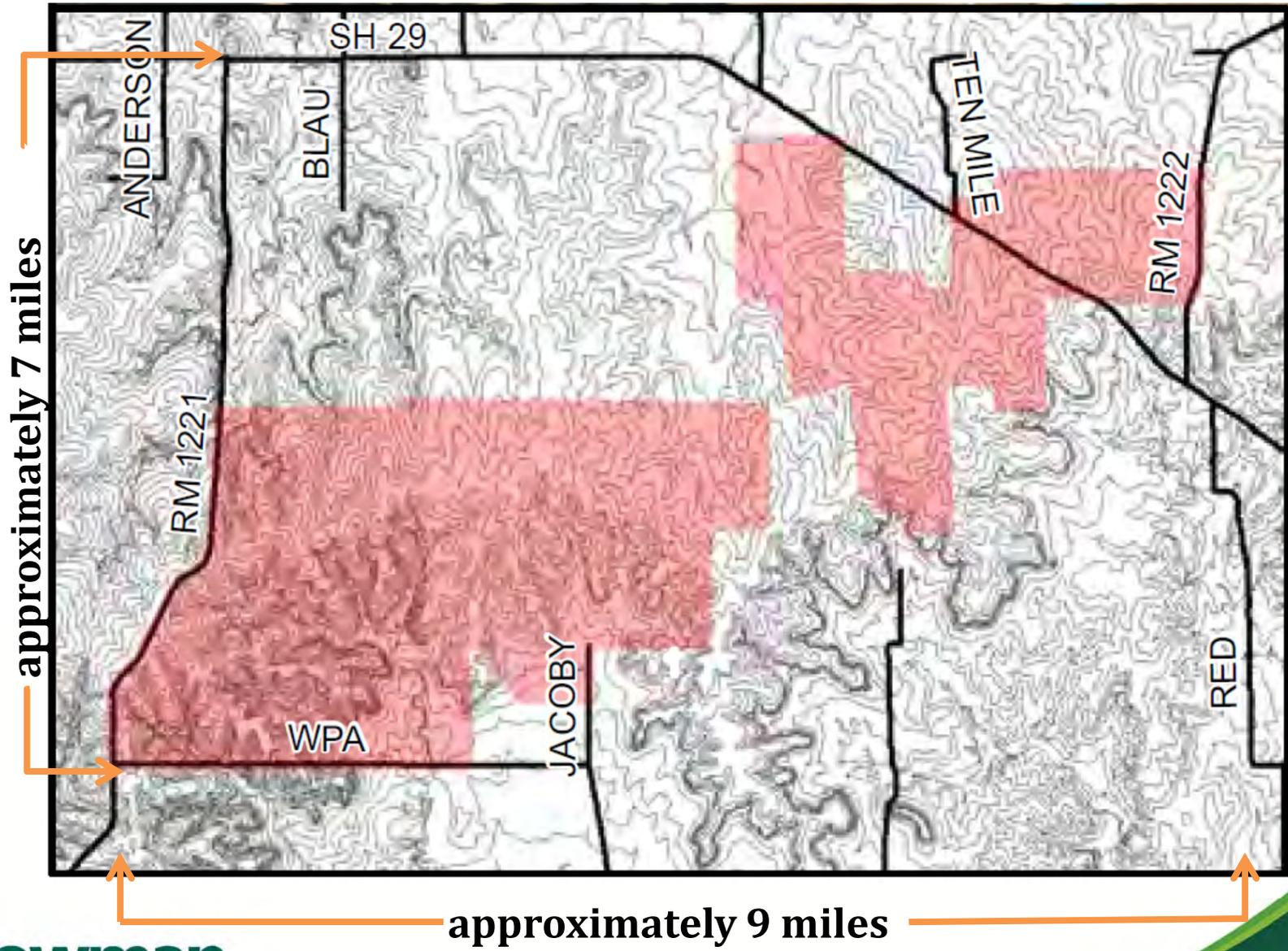
Study Area



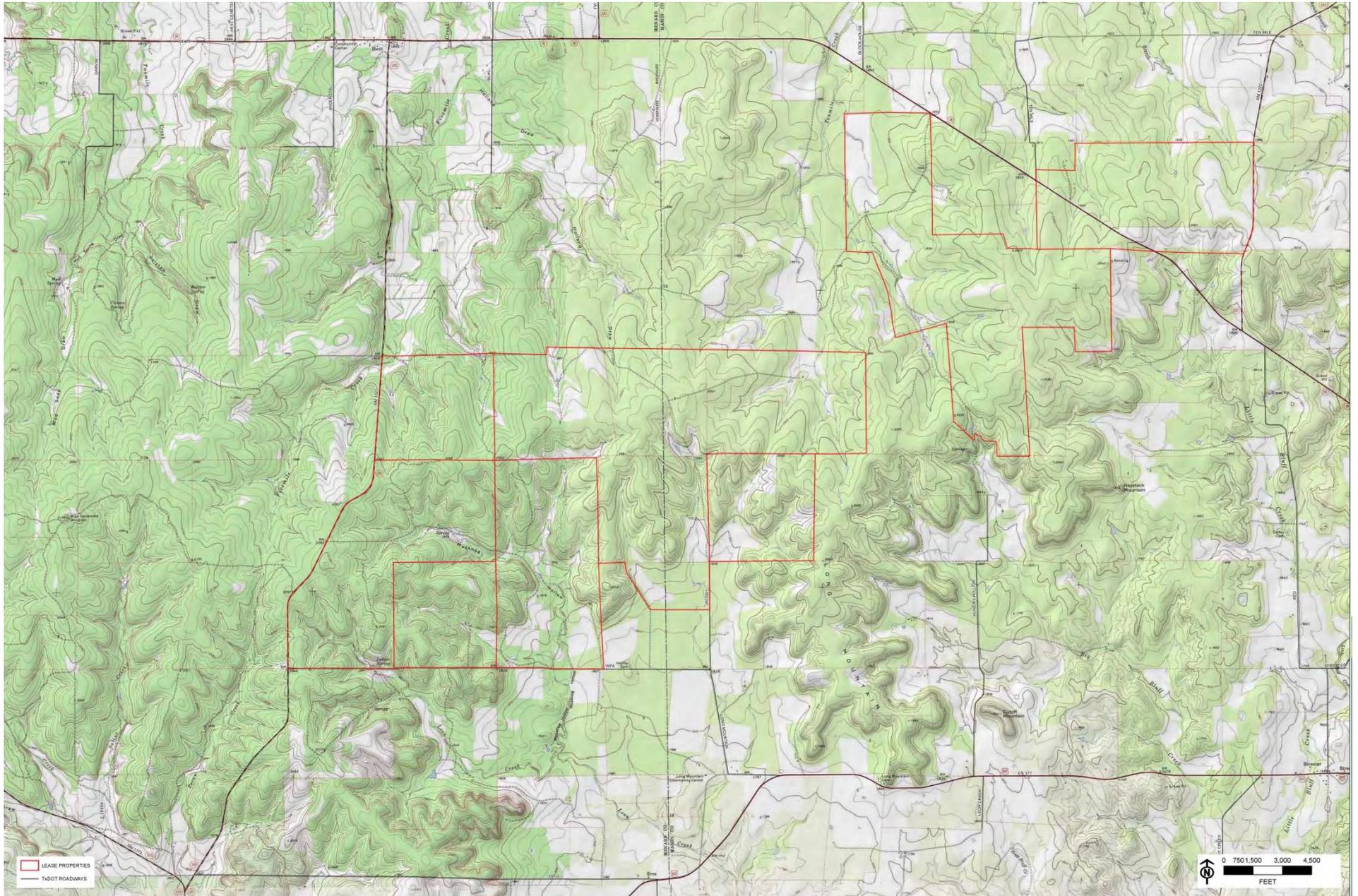
Known BCV populations which occur on wind farm development sites.



# MASON MOUNTAIN WIND PROJECT



# MASON MOUNTAIN WIND PROJECT



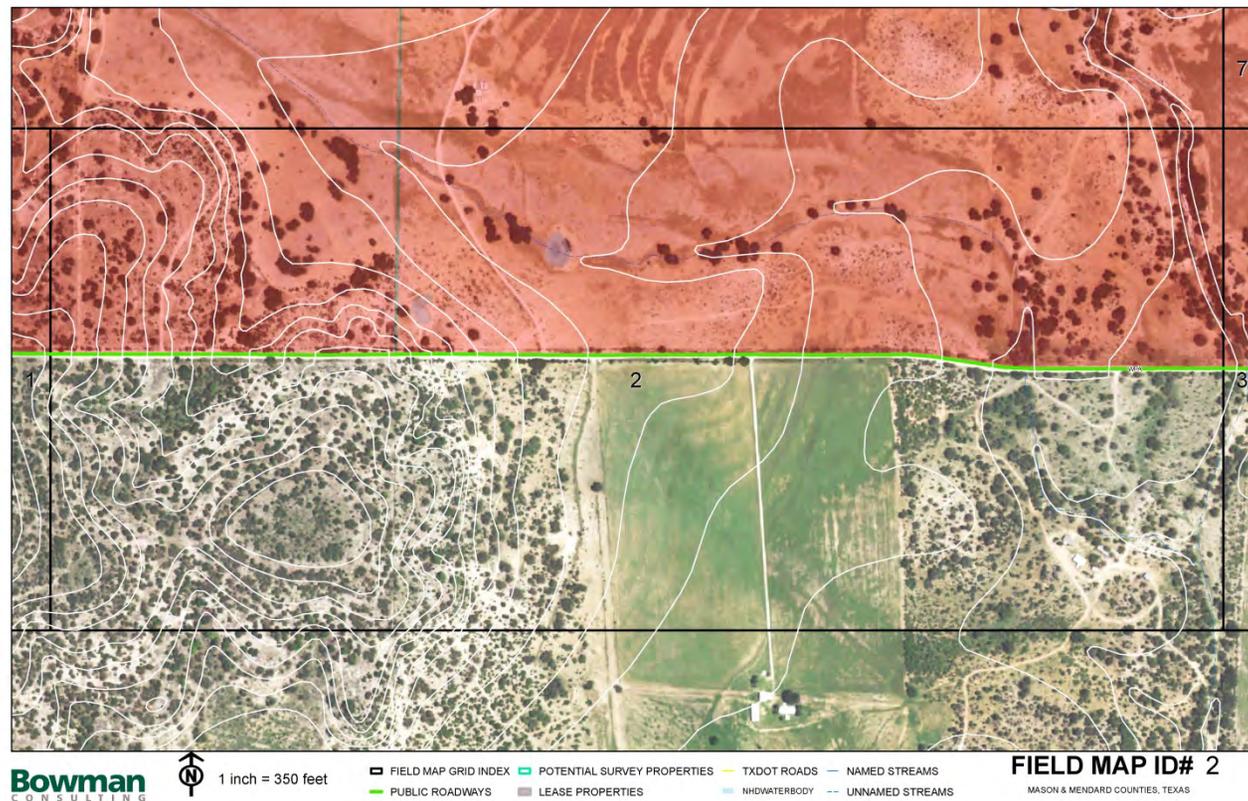
# RECONNAISSANCE SURVEY METHODOLOGY

- The purpose of this study was to document the extent of presence of the target species within the study area, **not absence**.
- Focused on identifying and documenting the location of individual BCVs or GCWs detected throughout the study area, and the corresponding habitat characteristics of both occupied and potential habitat areas encountered throughout the areas able to be surveyed.
- Used a modified spot-mapping technique, and followed various components of the USFWS protocol for GCW and BCV presence/absence surveys.



# RECONNAISSANCE SURVEY METHODOLOGY

- The Study Area was divided into survey blocks based on :
  1. Publically accessible road segments bordering or in close proximity to the proposed MMWP lease properties
  2. The size, location, and accessibility of privately owned lands adjacent to the MMWP perimeter



# RECONNAISSANCE SURVEY METHODOLOGY

For accessible, privately owned lands located adjacent to the MMWP lease properties several other factors were considered in identifying the survey areas, to include:

- Total area/distance of common perimeter
- Access limitations/requirements in order to survey
- Amount of potential habitat for the target species
- General property conditions and accessibility to the survey areas
- Specific location of each privately owned property within the study area



# RECONNAISSANCE SURVEY METHODOLOGY

The **rapid** reconnaissance surveys focused on covering as much acreage as was, or became, available to survey each survey day.



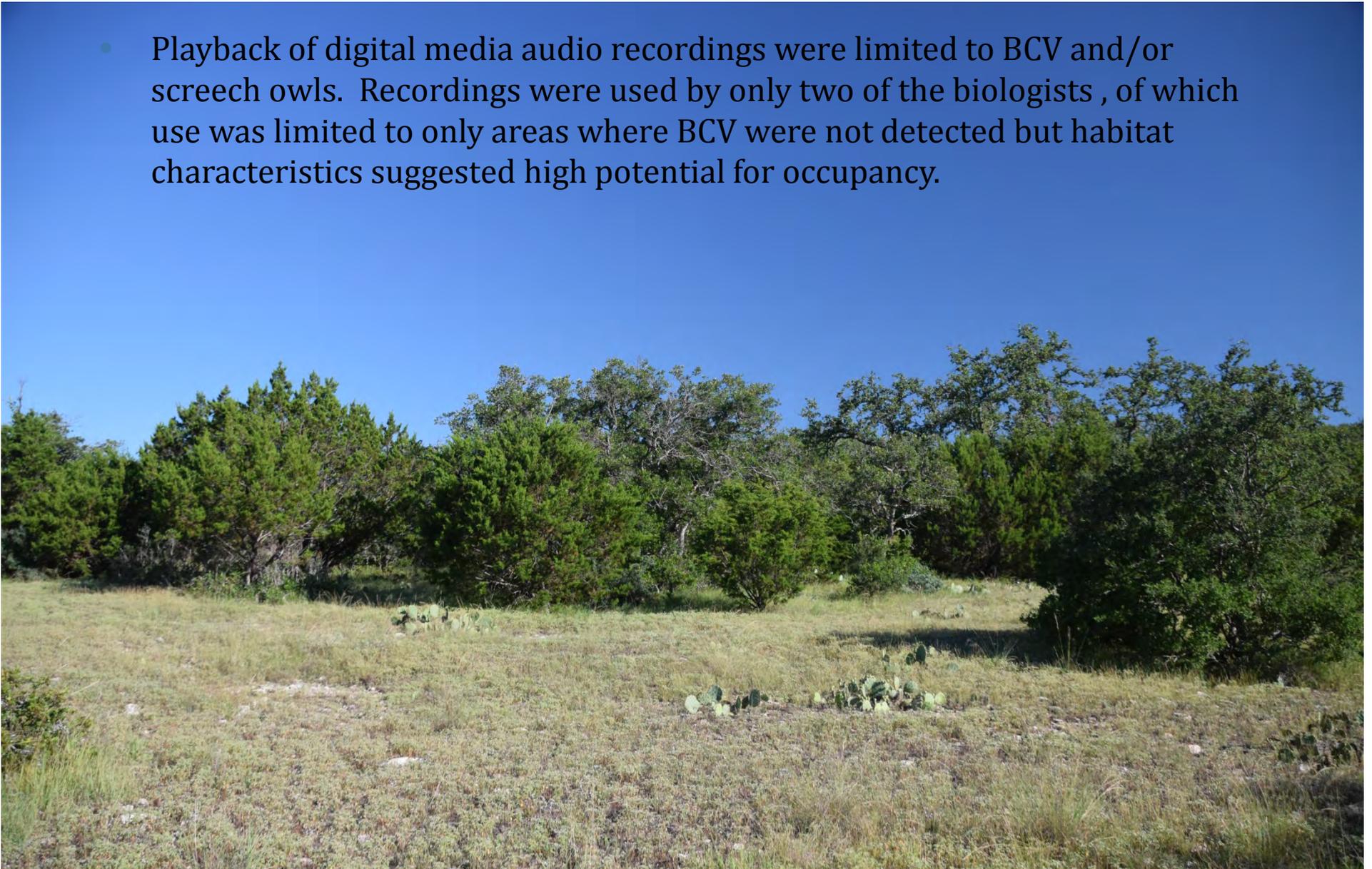
# RECONNAISSANCE SURVEY METHODOLOGY

- Surveys were structured to limit the overall potential for duplicative and/or multiple observations of the same individual BCV and/or GCW.
- Surveys conducted on:
  - June 24 and June 25, 2015 (1 biologist)
  - June 29 and June 30, 2015 (4 biologists)
  - July 1, 2015 (3 biologists)
- Surveys began within 30 minutes of sunrise or as soon as access onto a privately owned tract was available, and continued beyond 7 hours after sunrise for as long as bird activity remained detectible or coverage of a survey area was completed.
- Locations of each individual bird detected were recorded with GPS units



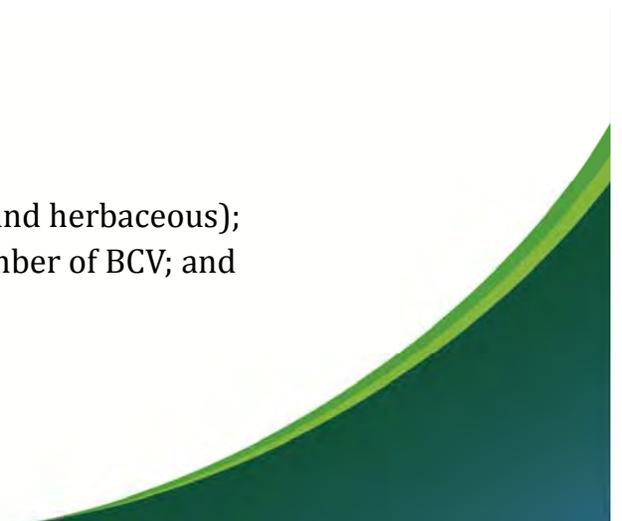
# RECONNAISSANCE SURVEY METHODOLOGY

- Playback of digital media audio recordings were limited to BCV and/or screech owls. Recordings were used by only two of the biologists , of which use was limited to only areas where BCV were not detected but habitat characteristics suggested high potential for occupancy.



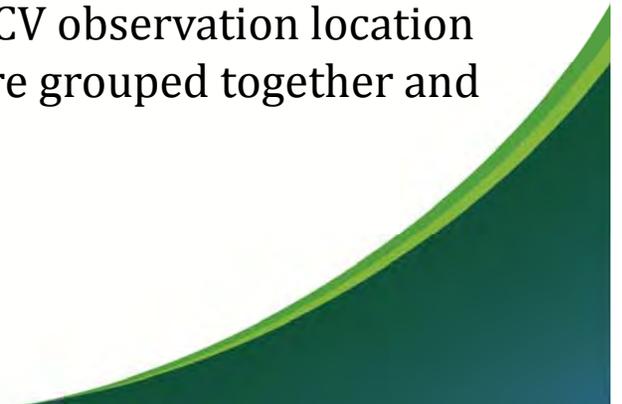
# HABITAT ASSESSMENT METHODOLOGY

- To describe the characteristics of the various habitats across the study area, vegetation data was collected at 80 points between June 24, June 25, June 29, June 30, and July 1, 2015.
- Vegetation data collection focused on documenting and describing each of the various habitat types and conditions present in which BCVs were:
  - Observed during the reconnaissance surveys; or
  - Observed vegetative conditions represented characteristics of potential habitats expected to be utilized by BCV, but no BCV were detected.
- Data collected at each assessment point included:
  - Estimated density of shrub layer vegetation;
  - Shrub layer and/or canopy height;
  - Dominant shrub layer species composition; and
  - General vegetation community.
- Additional data collected also included:
  - Other vegetation species within each vegetation class (trees, grasses, and herbaceous);
  - BCV presence at the vegetation data point or surrounding vicinity, number of BCV; and
  - Any impacts, land uses, or other incidental observations of note.



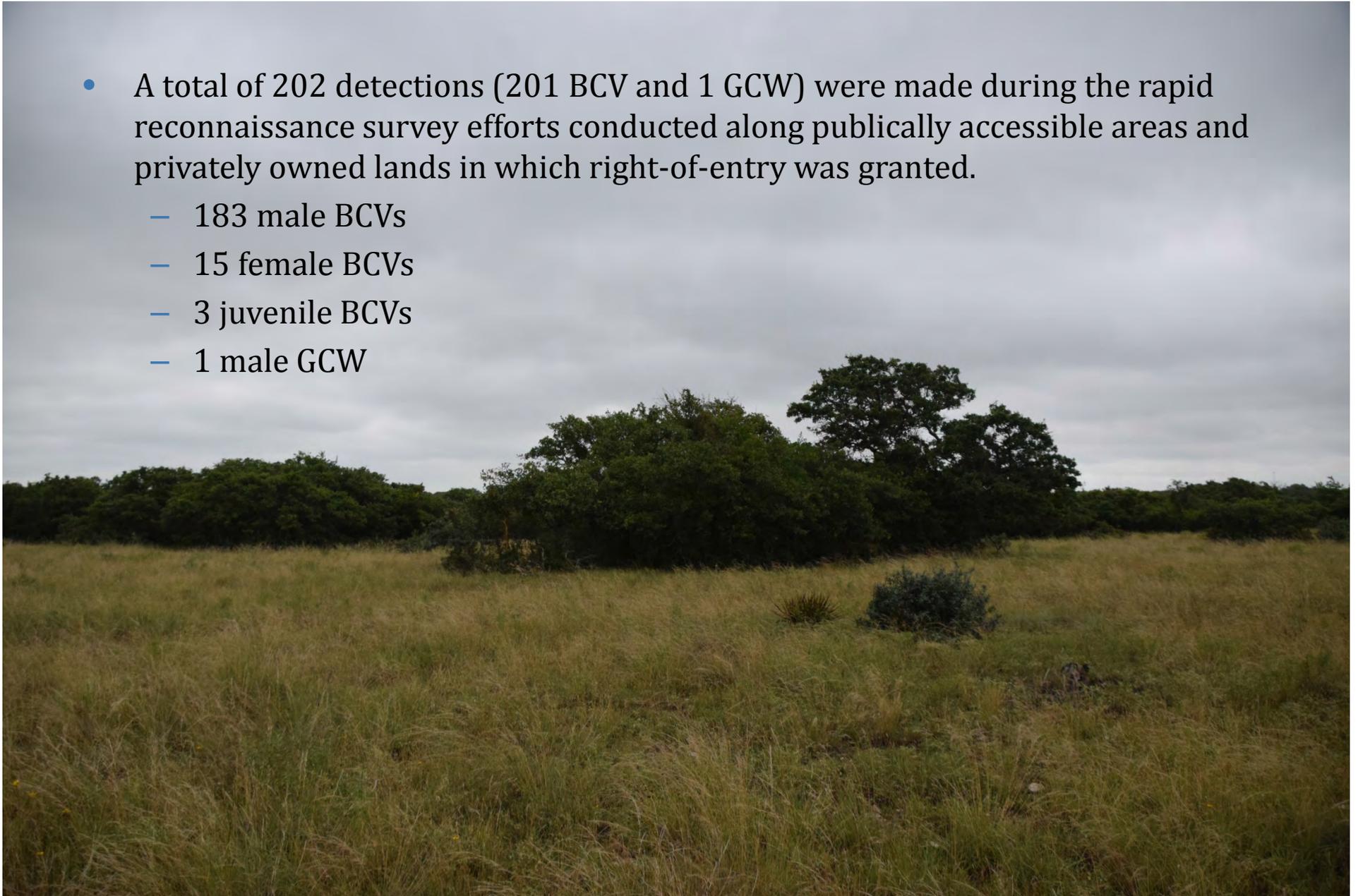
# HABITAT ASSESSMENT METHODOLOGY

- BCV observation data was used to develop a potential habitat map for the study area based on the specific TxESD value on which the BCV location was recorded and any other TxESD values within 300-ft of the BCV location.
  - Used ArcGIS 10.3 Spatial Analysis to extract TxESD values to the BCV observation data.
  - Identified each unique TxESD value within the BCV observation data.
  - The TxESD values were then grouped into two categories based on whether or not a BCV observation occurred on that value.
  - BCV observations were then buffered by a 300-ft radius, and the TxESD dataset was clipped to the extent of the 300-ft buffers.
  - The TxESD values were then grouped into two categories based on whether or not a TxESD value occurred within any of the BCV observation location 300-ft buffers.
  - The remaining TxESD values not included in the BCV observation location or the BCV observation location 300-ft buffers were grouped together and identified as not likely potential habitat.



# RECONNAISSANCE SURVEY RESULTS

- A total of 202 detections (201 BCV and 1 GCW) were made during the rapid reconnaissance survey efforts conducted along publically accessible areas and privately owned lands in which right-of-entry was granted.
  - 183 male BCVs
  - 15 female BCVs
  - 3 juvenile BCVs
  - 1 male GCW



# RECONNAISSANCE SURVEY RESULTS

- Of the total number of BCV observations, 121 were precisely located, 81 were imprecisely located, and the individual GCW location was precisely located.
- For the 81 imprecisely located detections
  - 6 detections were recorded with an estimated 100 to 200-ft radius area of the birds location (7.4 percent)
  - 10 detections were recorded within a 90-ft radius of the estimated location of the individual
  - 65 detections occurred within a 30 to 60-ft radius of the observation point (80.2 percent)
- All observations were recorded with GPS units in the field
- Approximately 24 percent of the total BCV observations (48 observations) were recorded within the boundary of the MMWP.





## RECONNAISSANCE SURVEY RESULTS

- Based on the field survey data collection methods, known areas of duplication, single-visit, and observations mapped in the following figure, we estimate that the observations were associated with up to:
  - 169 male BCV
  - 15 female BCV
  - 3 juvenile BCV
  - 1 GCW

# HABITAT ASSESSMENT RESULTS

- Detected birds were primarily using numerous types of potential/suitable habitats located within, adjacent, and throughout the vicinity of the study area
- A total of at least 48 individuals were observed and located within the leased properties utilizing patches of suitable habitat present on the proposed MMWP



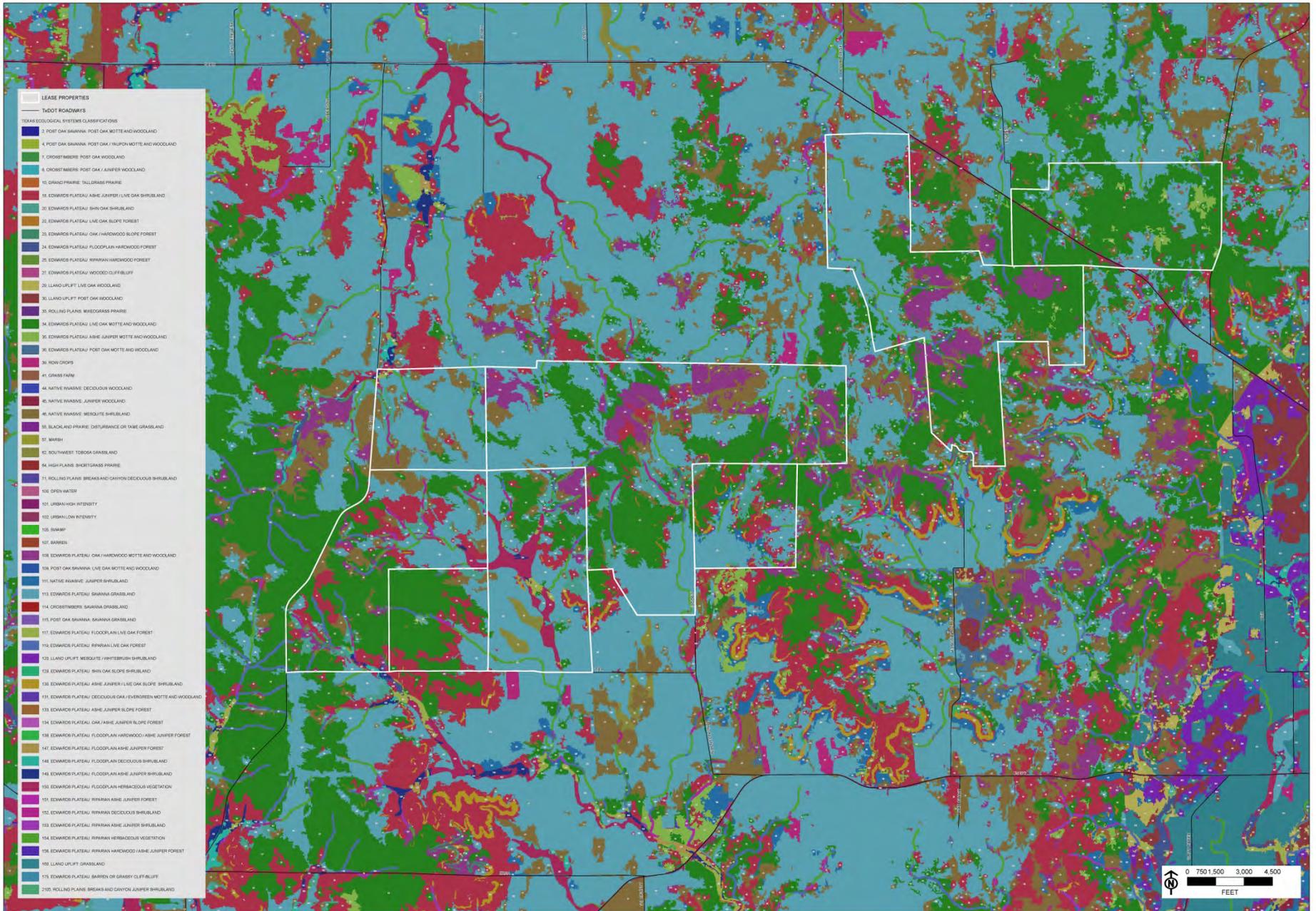


FIGURE 6  
TEXAS ECOLOGICAL SYSTEMS CLASSIFICATIONS  
MASON COUNTY ENDANGERED SPECIES SURVEY SUMMARY

# WHY THIS AREA IS IMPORTANT

BCVs are likely present throughout the Long Mountain area within Mason and Menard counties, and the overall BCV population there is likely quite substantial.

- End of season survey timing
- The number of BCVs detected
- The diversity of vegetation communities occupied by the BCV
- The diversity of habitat types occupied by the BCV
- Spatial variation within BCV occupied areas

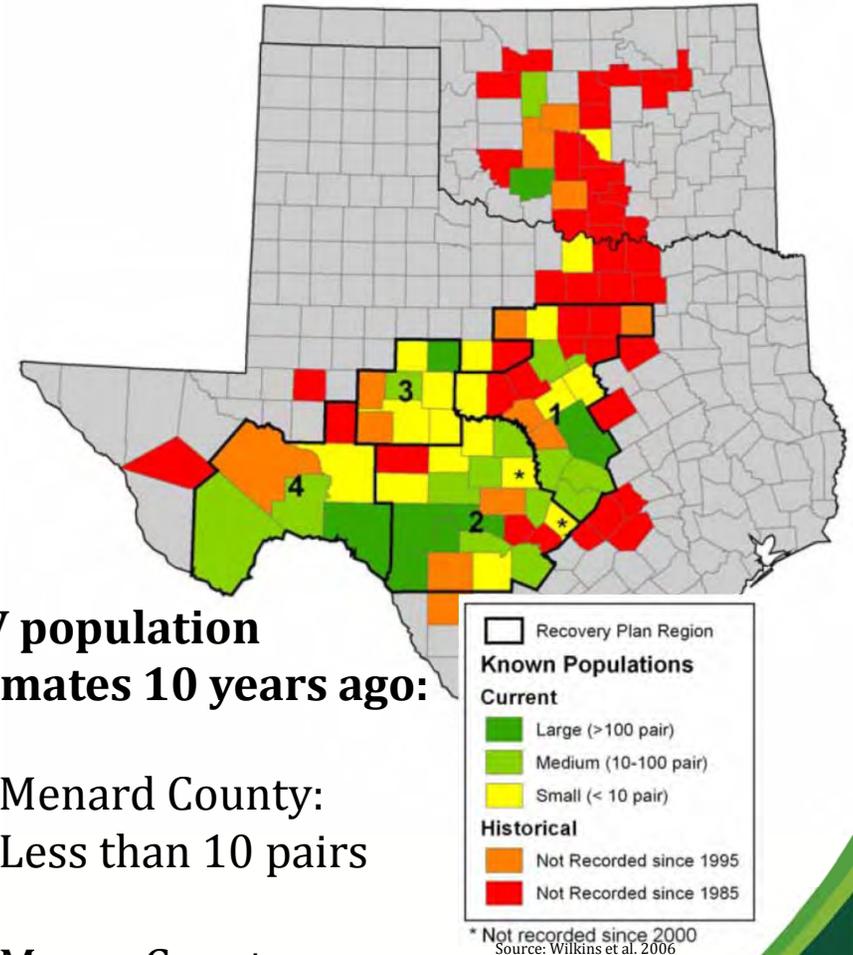


# WHY THIS AREA IS IMPORTANT

The overall BCV population present throughout the Long Mountain area of Mason and Menard counties is unknown.

The general placement of BCVs across various landscape levels and habitat characteristics, may indicate growth within the population. BCVs have been determined to utilize secondary and tertiary habitat types, as the overall population in a specific area increases, and availability of primary habitat is fully occupied.

It is also possible that this BCV population is the start of working towards a single breeding population starting from the DRSNA , through Kerr WMA, and connecting over to Ft. Hood.



- Menard County:  
Less than 10 pairs
- Mason County:  
Between 10 and 100 pairs.

# ACKNOWLEDGEMENTS



- Texas Hill Country Heritage Association
- Landowners
- Braun & Gresham, PLLC
- Survey Team



# QUESTIONS?

