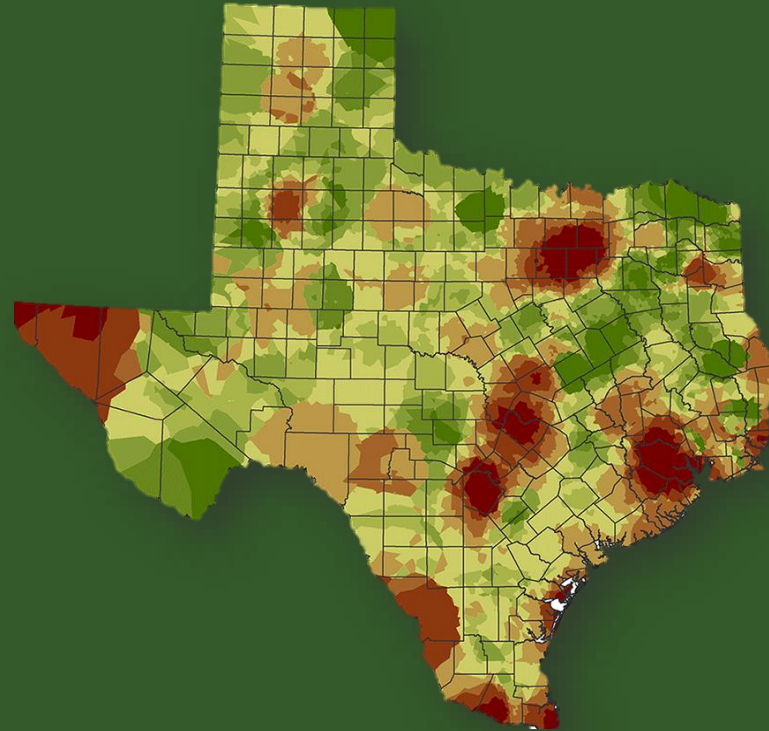


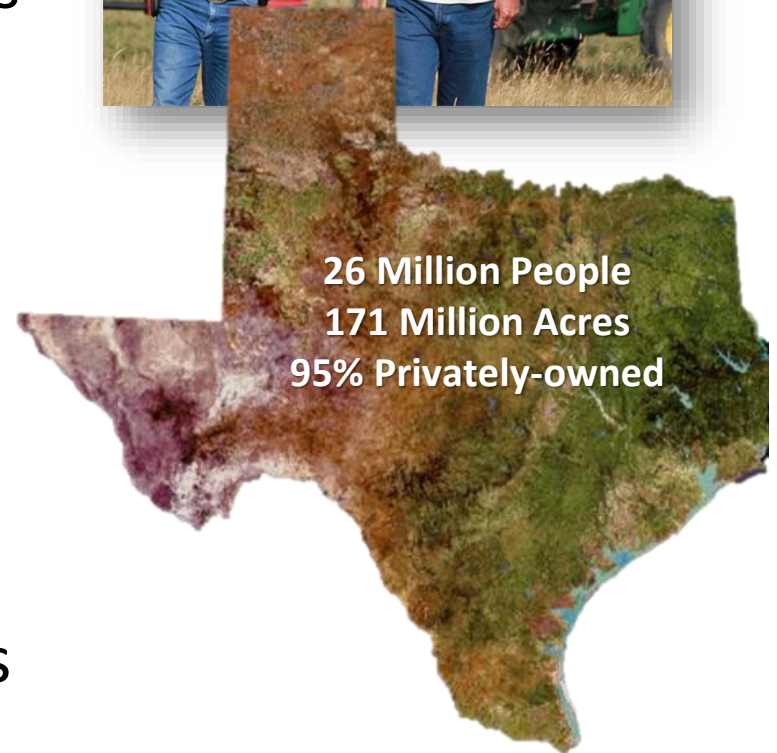
# *How and Why Texas is Changing*



Roel R. Lopez

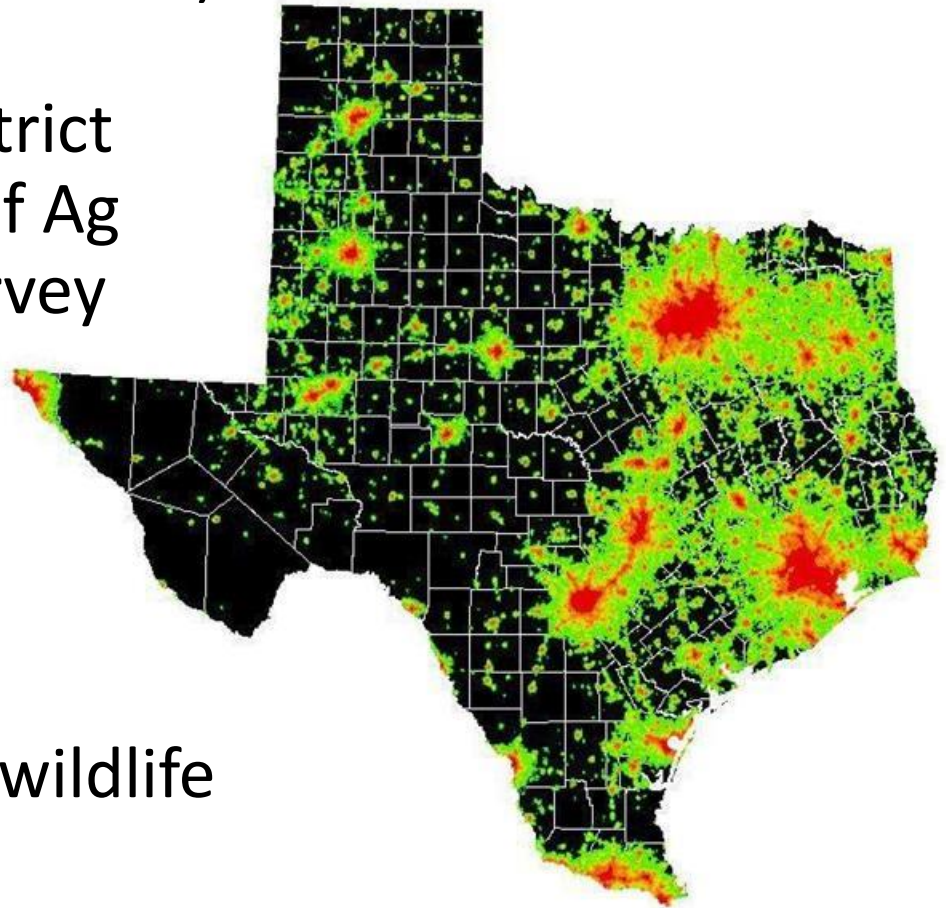
# Value of Rural Lands

- Rural working lands –critical role in providing water, food, energy, and national security
- *Effective* conservation requires innovative solutions to sustaining private rural working lands.
- Review of data to give a perspective on challenges
  - More people...
  - Less farms and ranches...
  - Changing landowners....
- Opportunities and approaches



# Texas Land Trends

- Trends in land use (1997-2012)
- Primary datasets used
  - County Appraisal District
  - USDA NASS Census of Ag
  - Texas Landowner Survey
- Relationships among
  - Land Value
  - Land Ownership
  - Land Use
- ***Working Lands*** – farms, ranches, family forests, wildlife (e.g., 1D, 1D1)





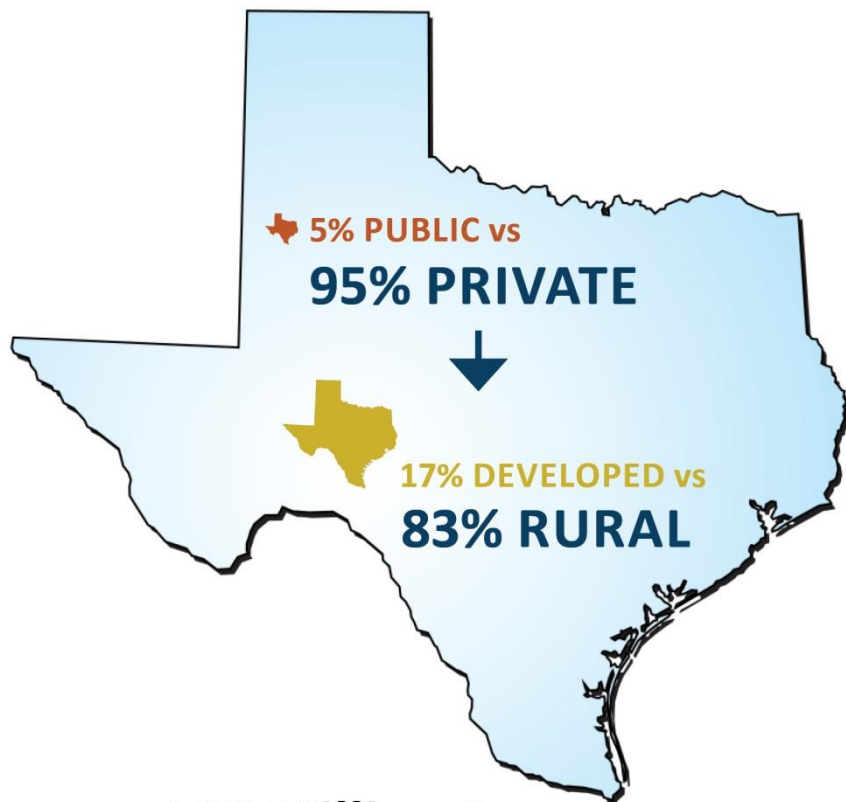
# More People....





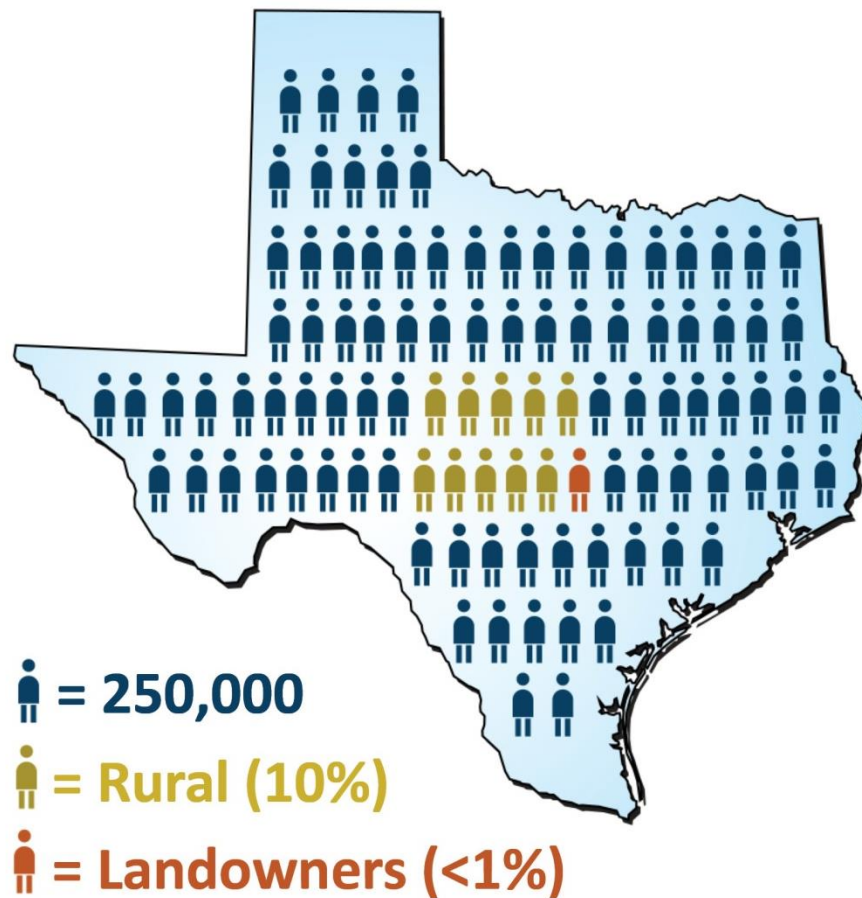
# Changing Texas

171 Million Acres...



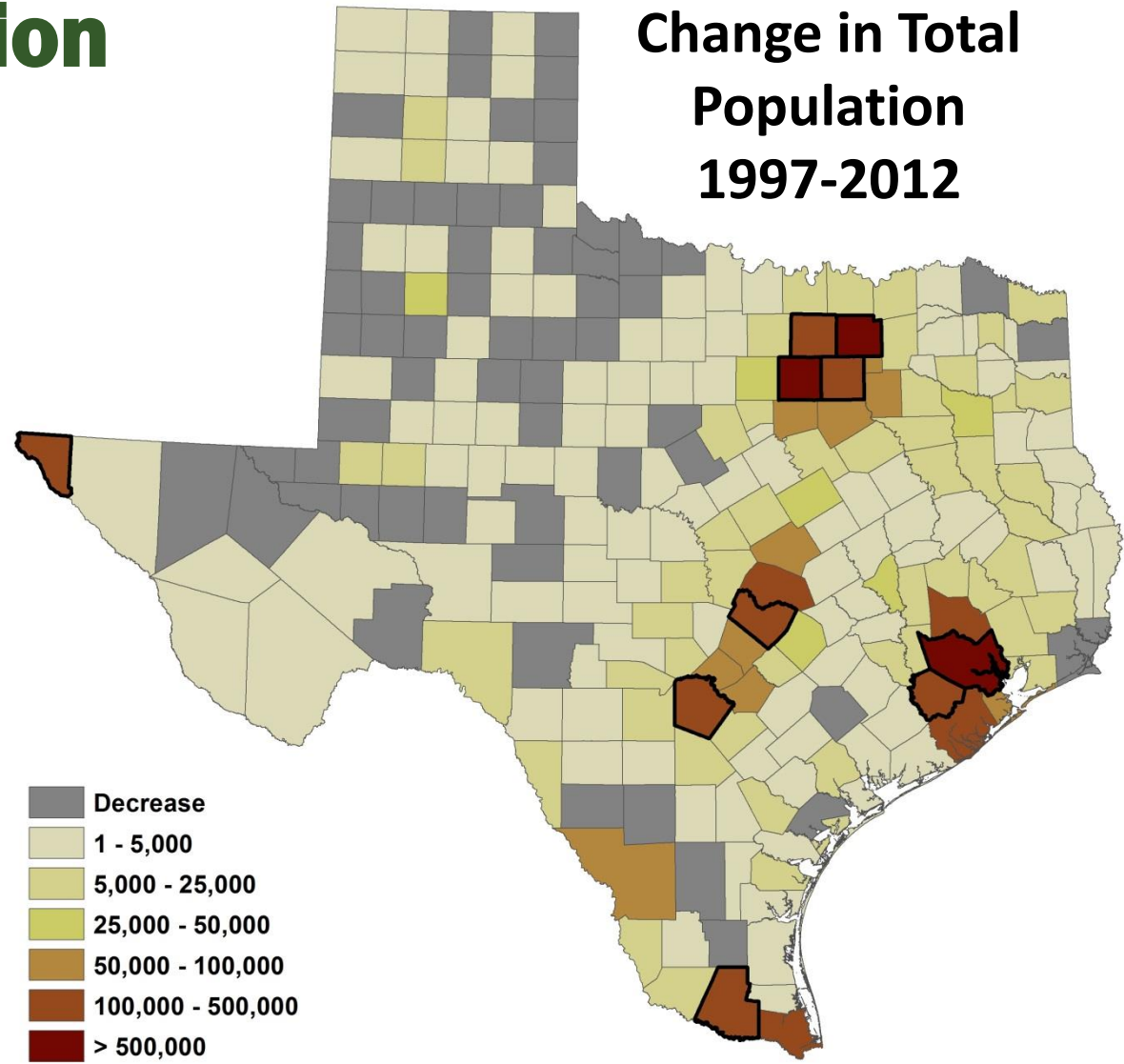
...142 Million Acres  
*Private Working Lands*

Population: 26 Million...

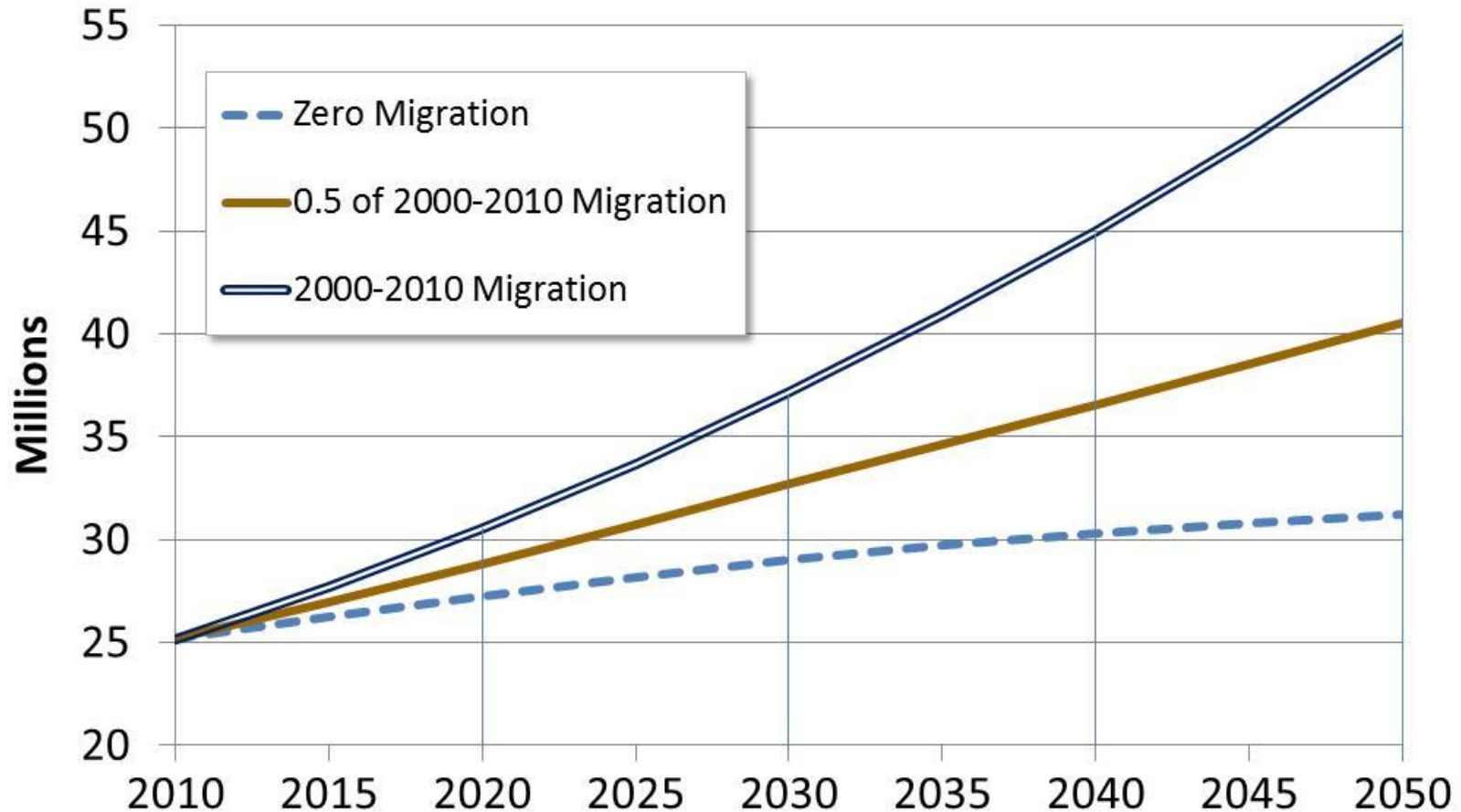


# Texas Population

- 1997 – 19 Million
- 2012 – 26 Million
- 36% increase
- 500,000/year
- 65% of increase occurred within *Top Ten Populated Counties*

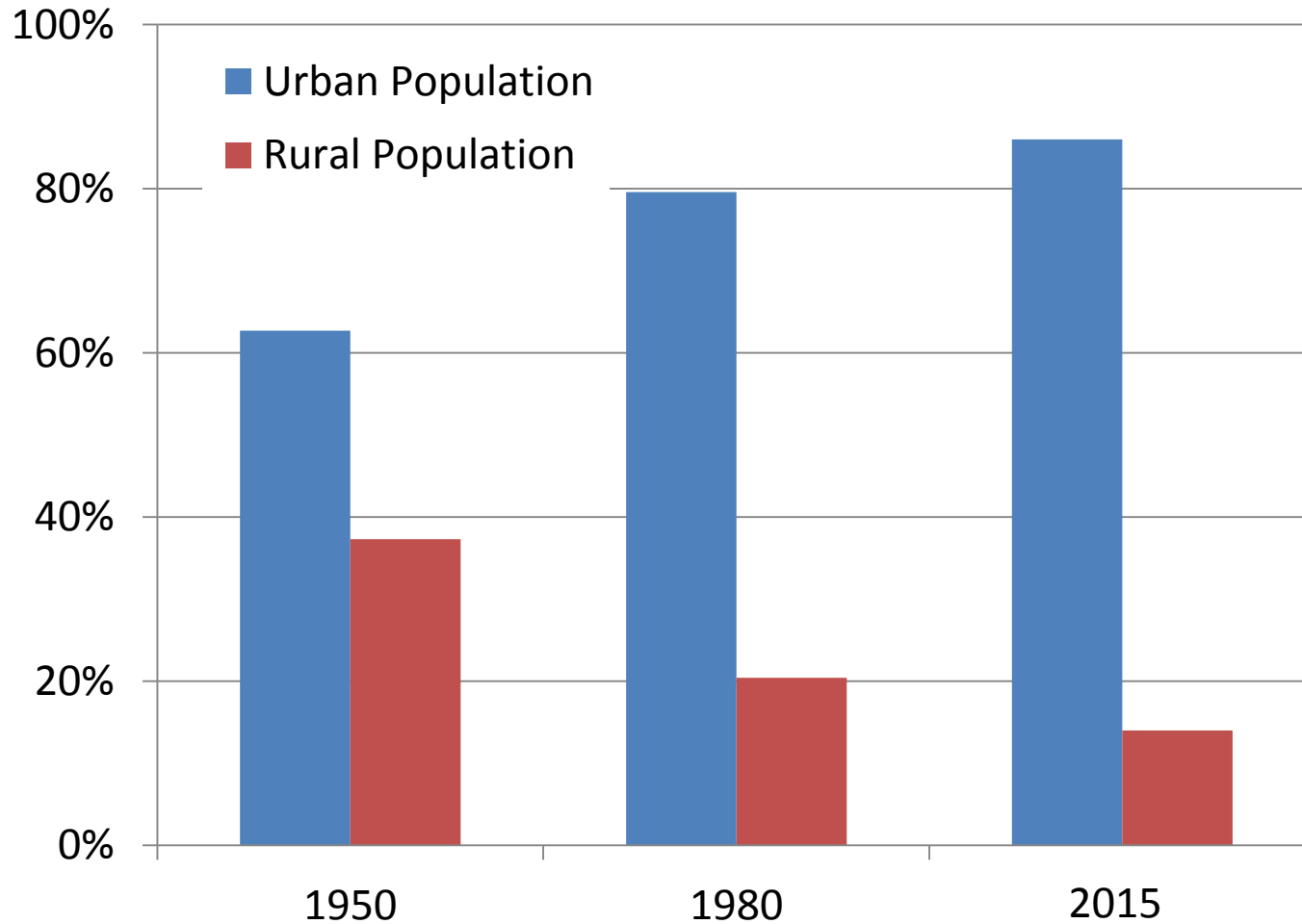


# Texas Projections (2010-2050)



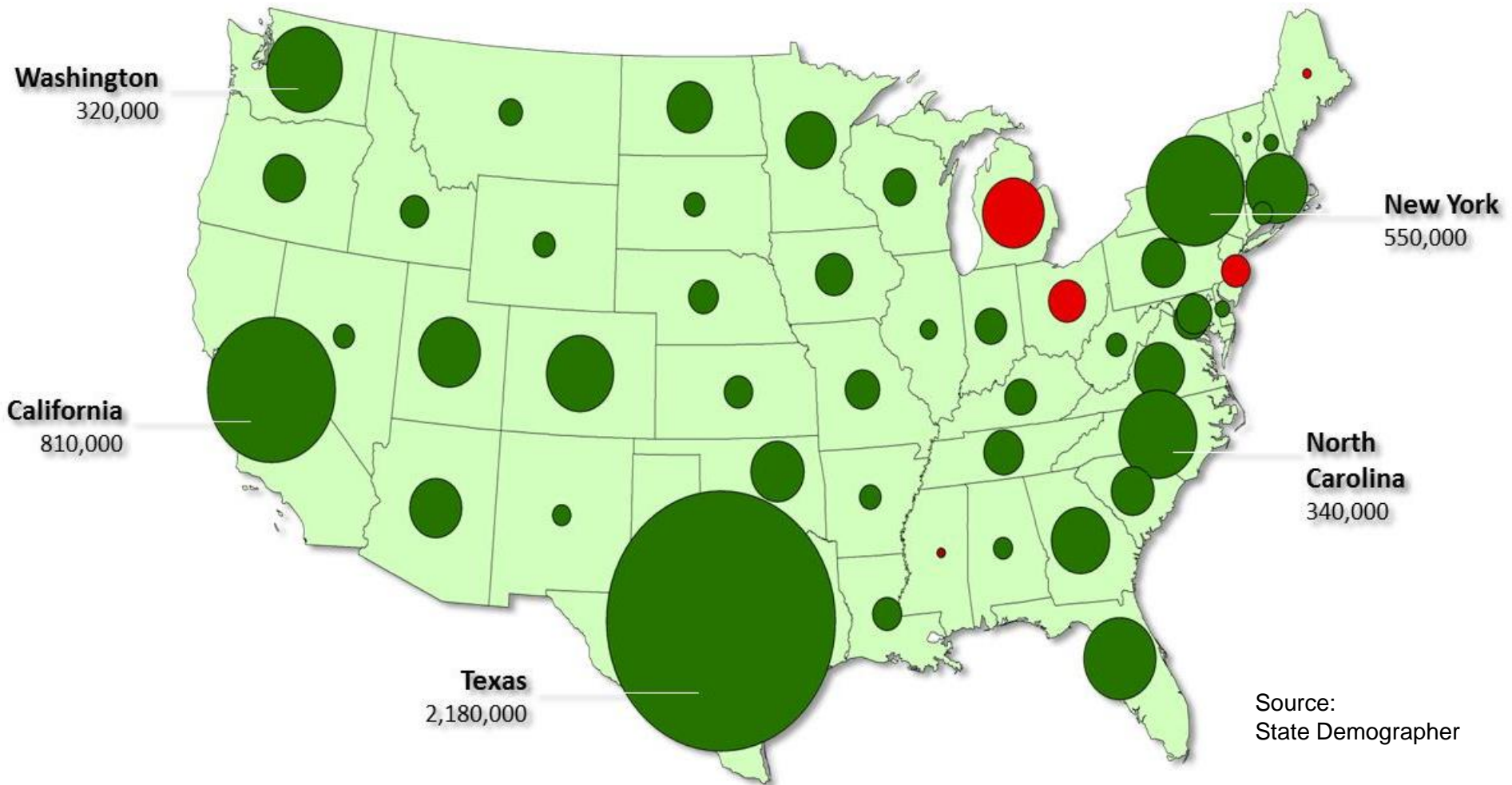
Source: State Demographer

# Texas Rural and Urban Populations





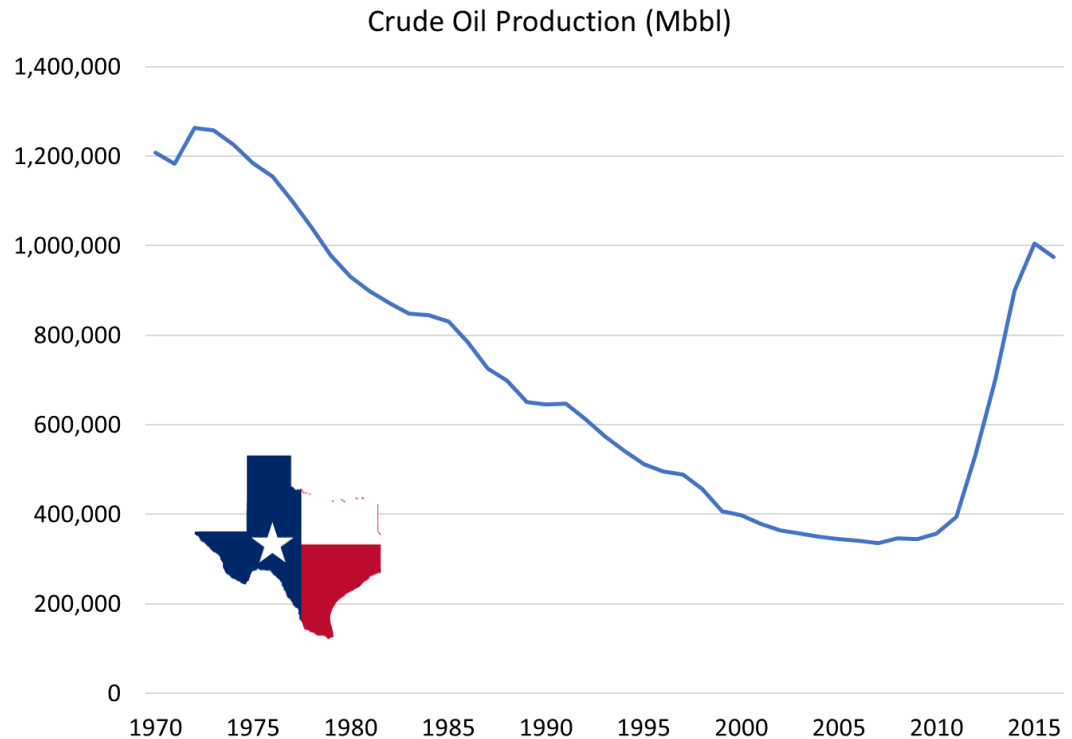
# Texas Leads U.S. Job Growth (2004-2014)



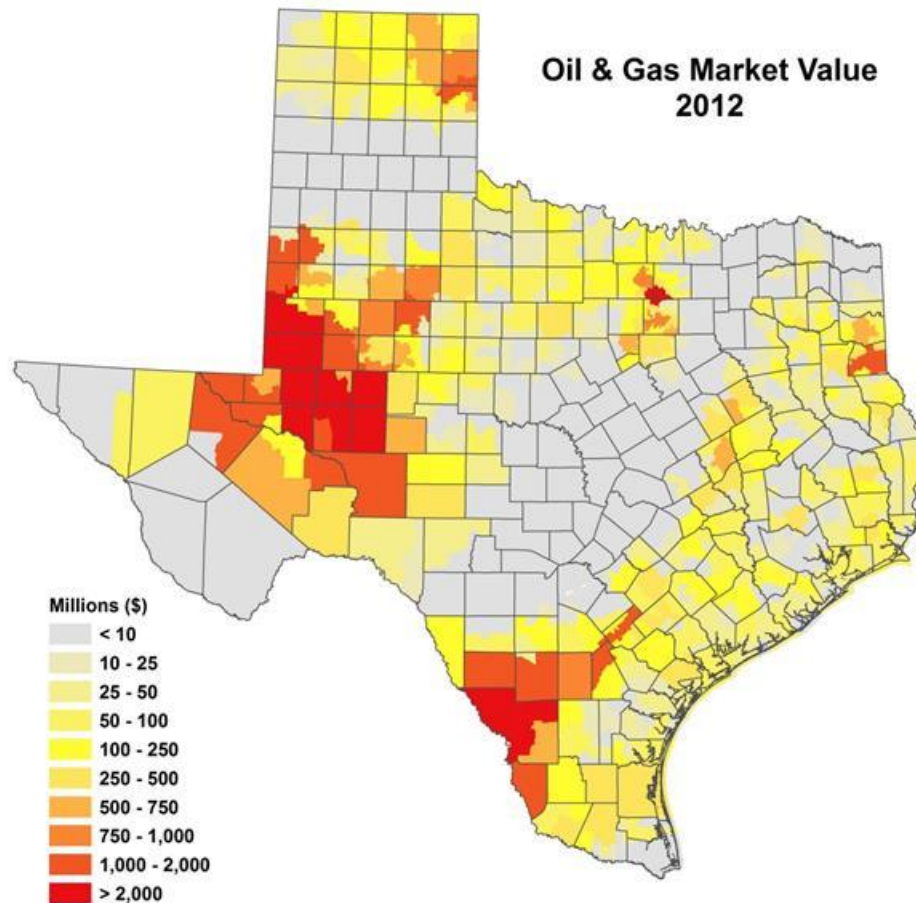
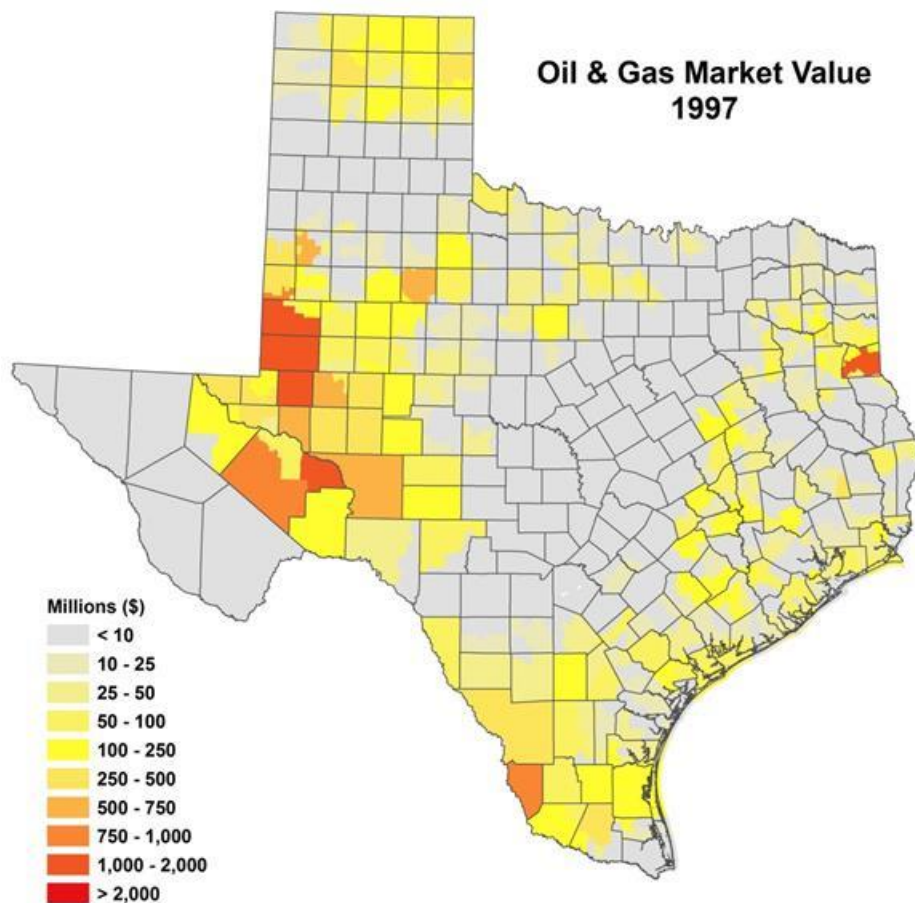
Source:  
State Demographer

# Oil and Gas

- *Economic Driver* — Texas is leading crude oil production state in part to 3 large shale gas plays
- Eagle Ford Shale
  - \$87B in revenue (2014)
  - Natural gas production has *doubled* and oil production has increased *6X*.

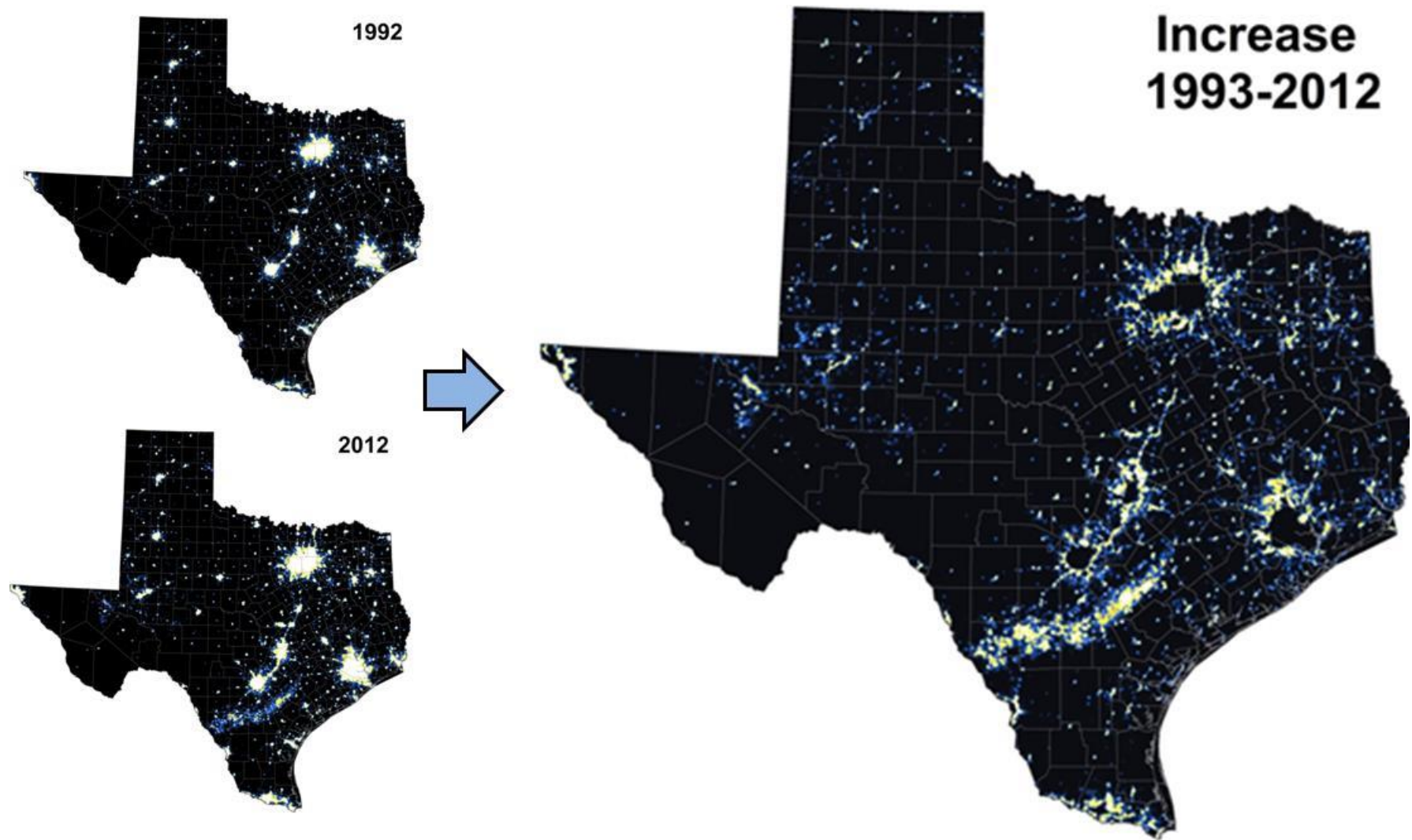


# Oil and Gas





# Night Time Illumination

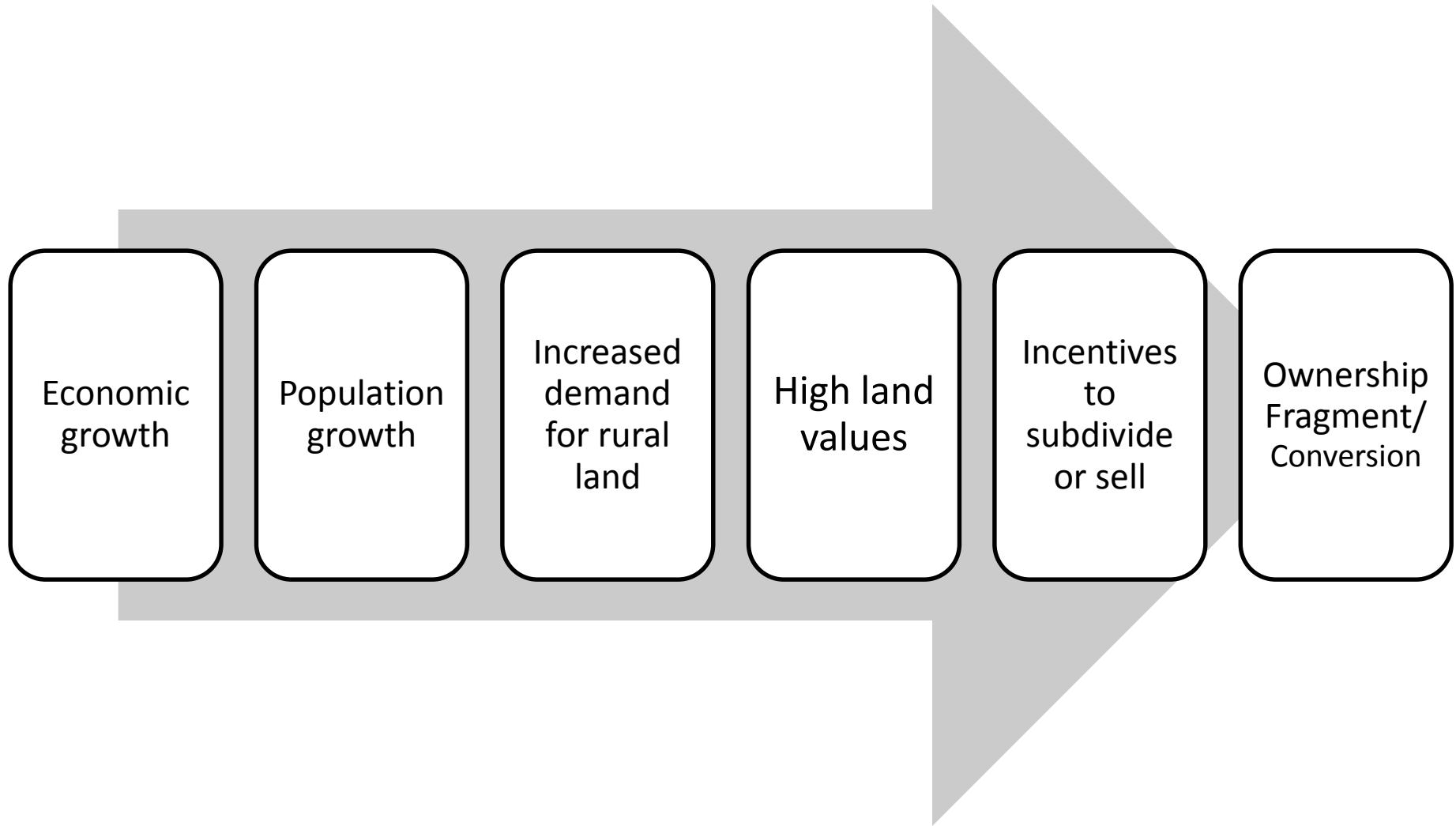


# Less Farms and Ranches....





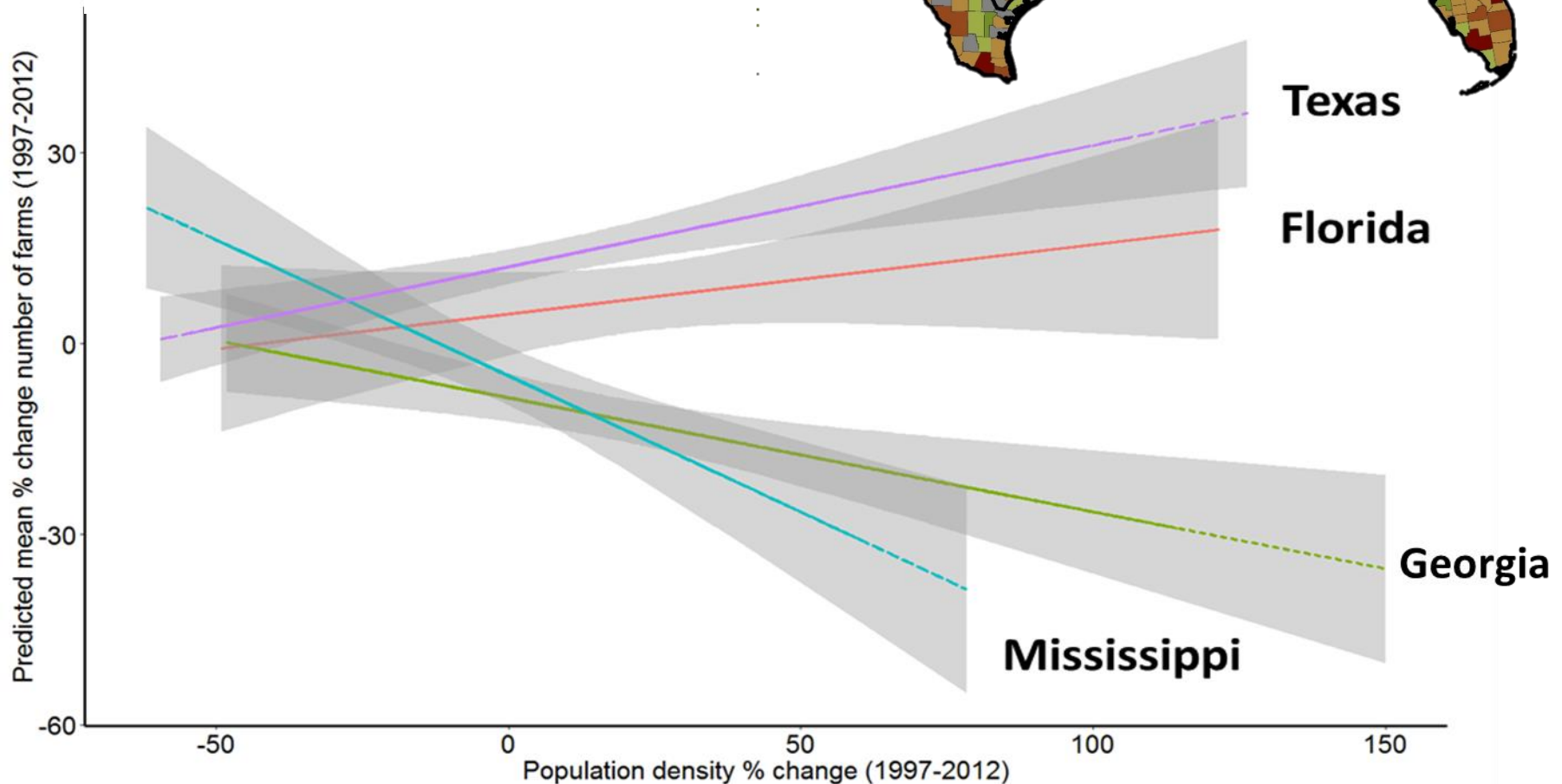
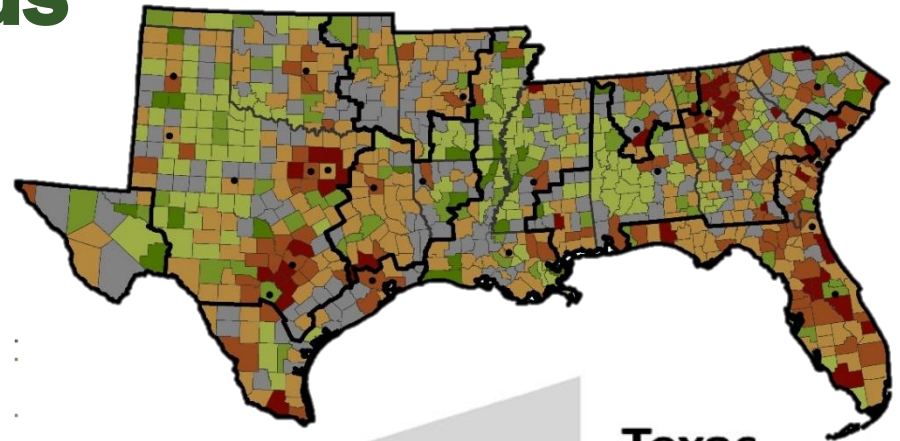
# Change in Working Lands – *Process*





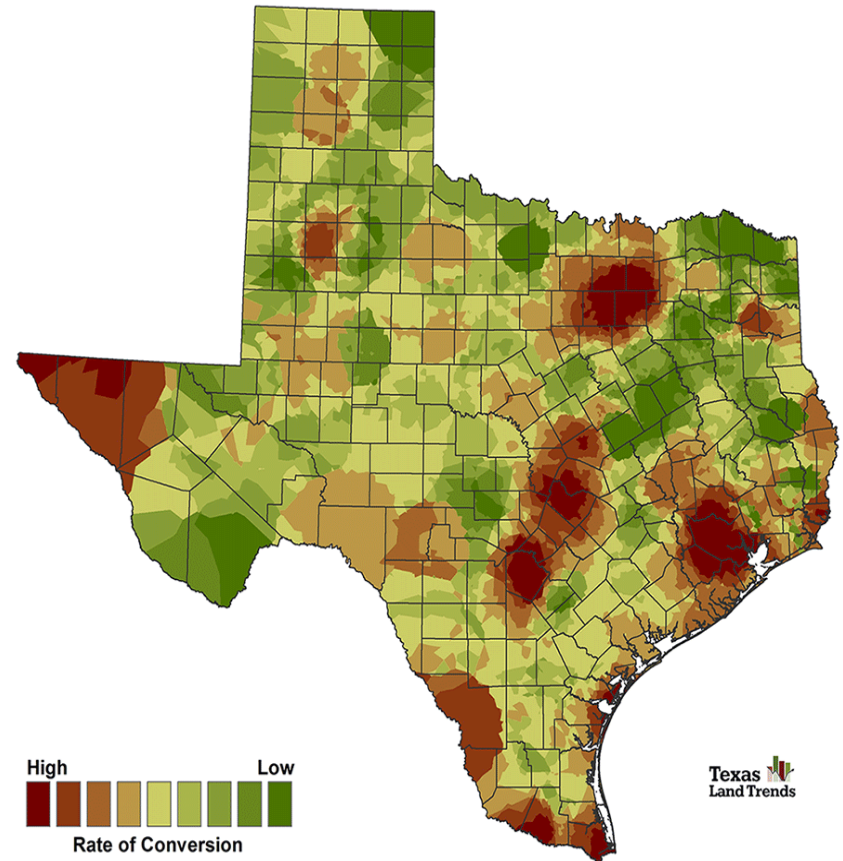
# Regional Land Trends

Population Density % Change  
Predicted Change # Farms  
(1997-2012)



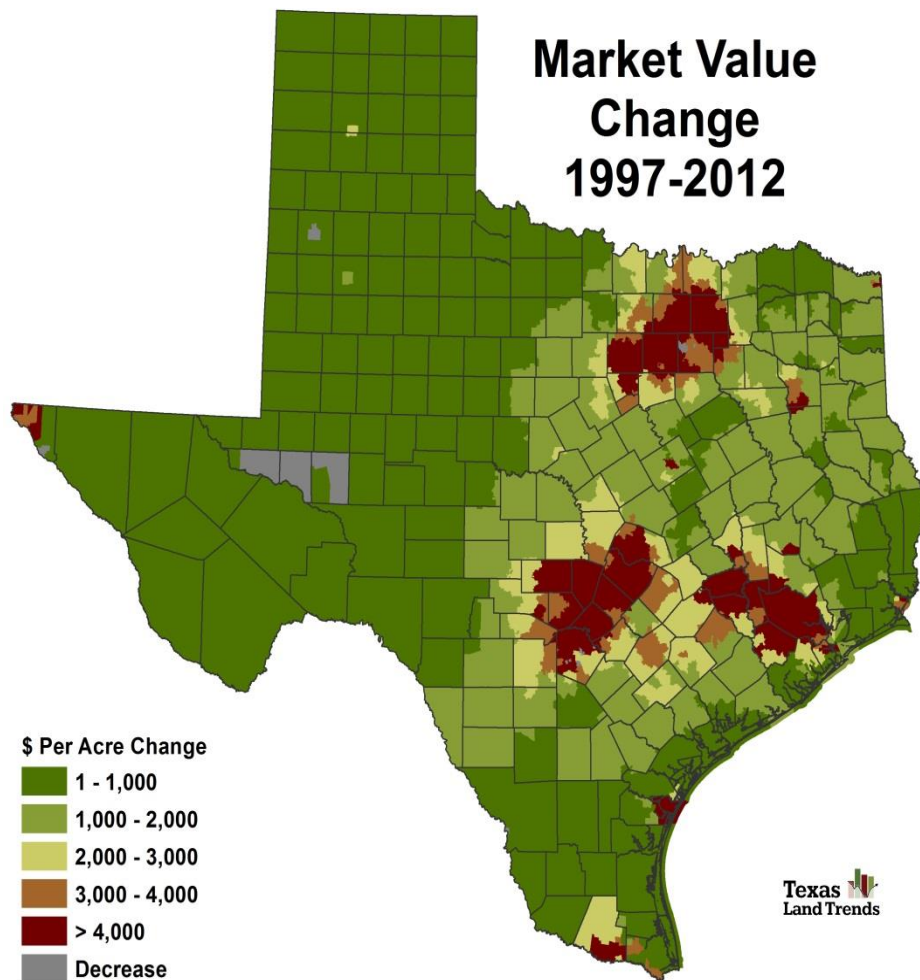
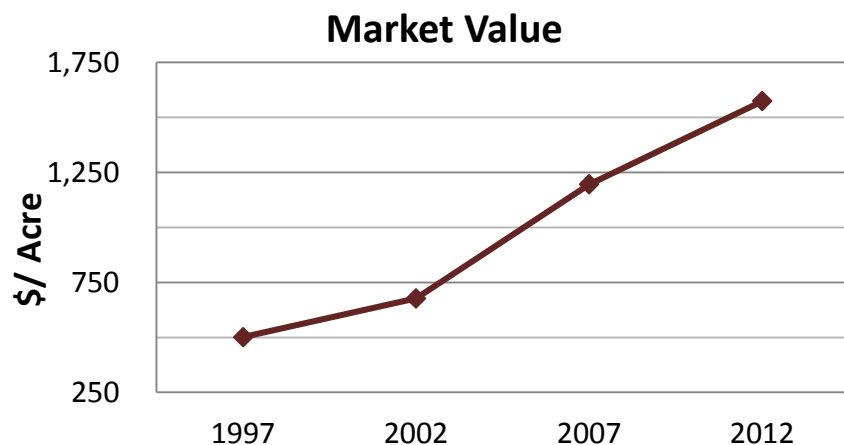
# Working Land Loss – Conversion

- 1997 – 143 Million acres
- 2012 – 142 Million acres
- Loss ~1 Million acres



# Market Value – *Driver*

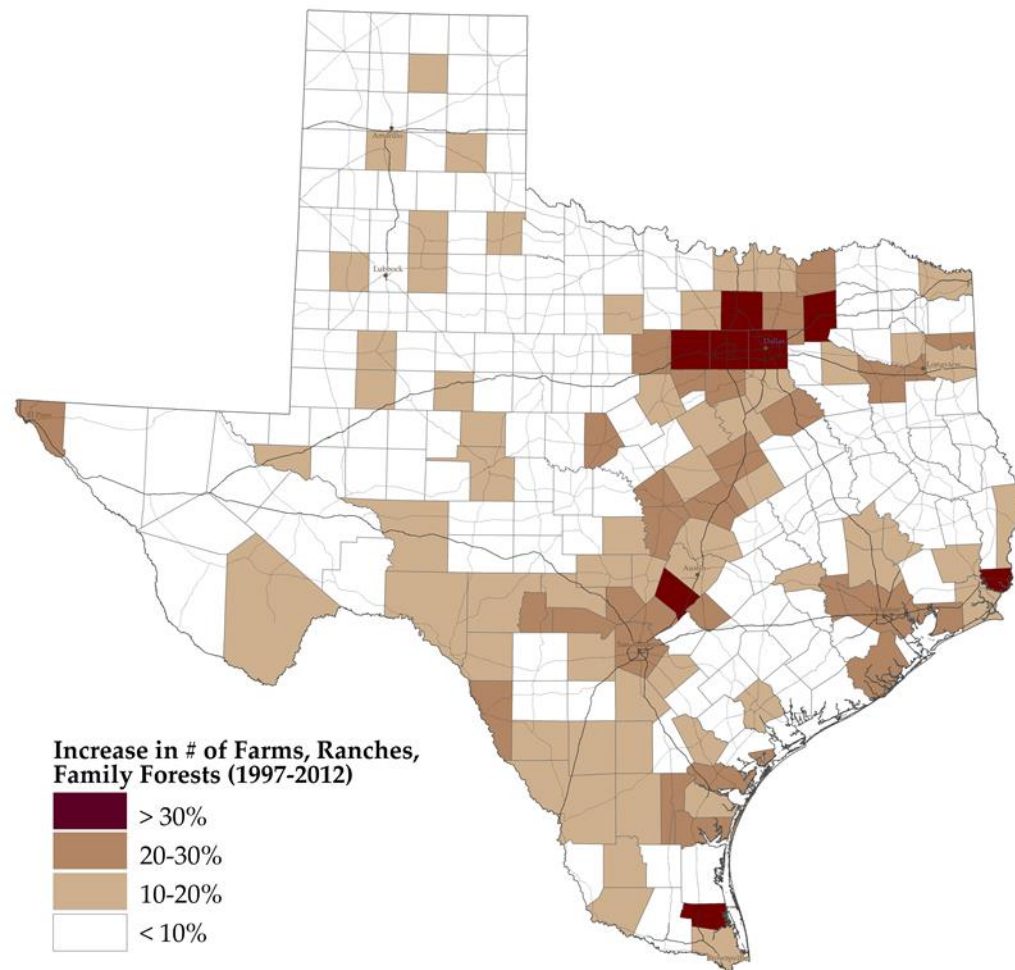
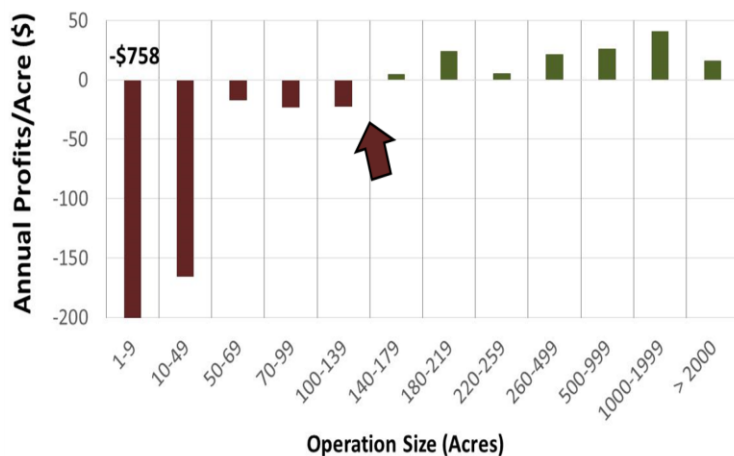
- 1997 – \$501/Acre
- 2012 – \$1,573/Acre
- Gain of \$1,072/Acre





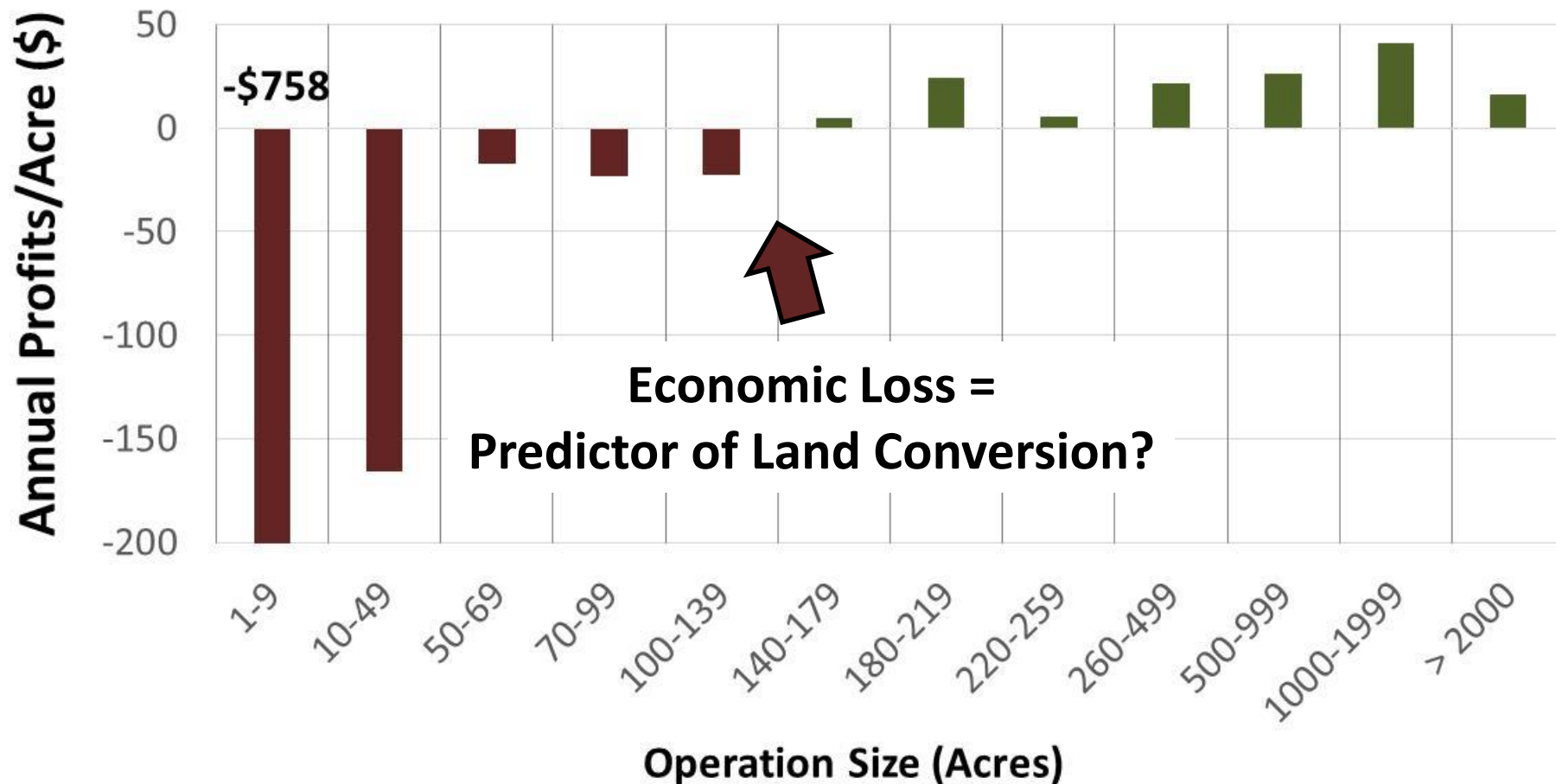
# Working Land Loss – *Fragmentation*

- 25,000+ new farms and ranches (1997-2012)
- 4.5M acres impacted

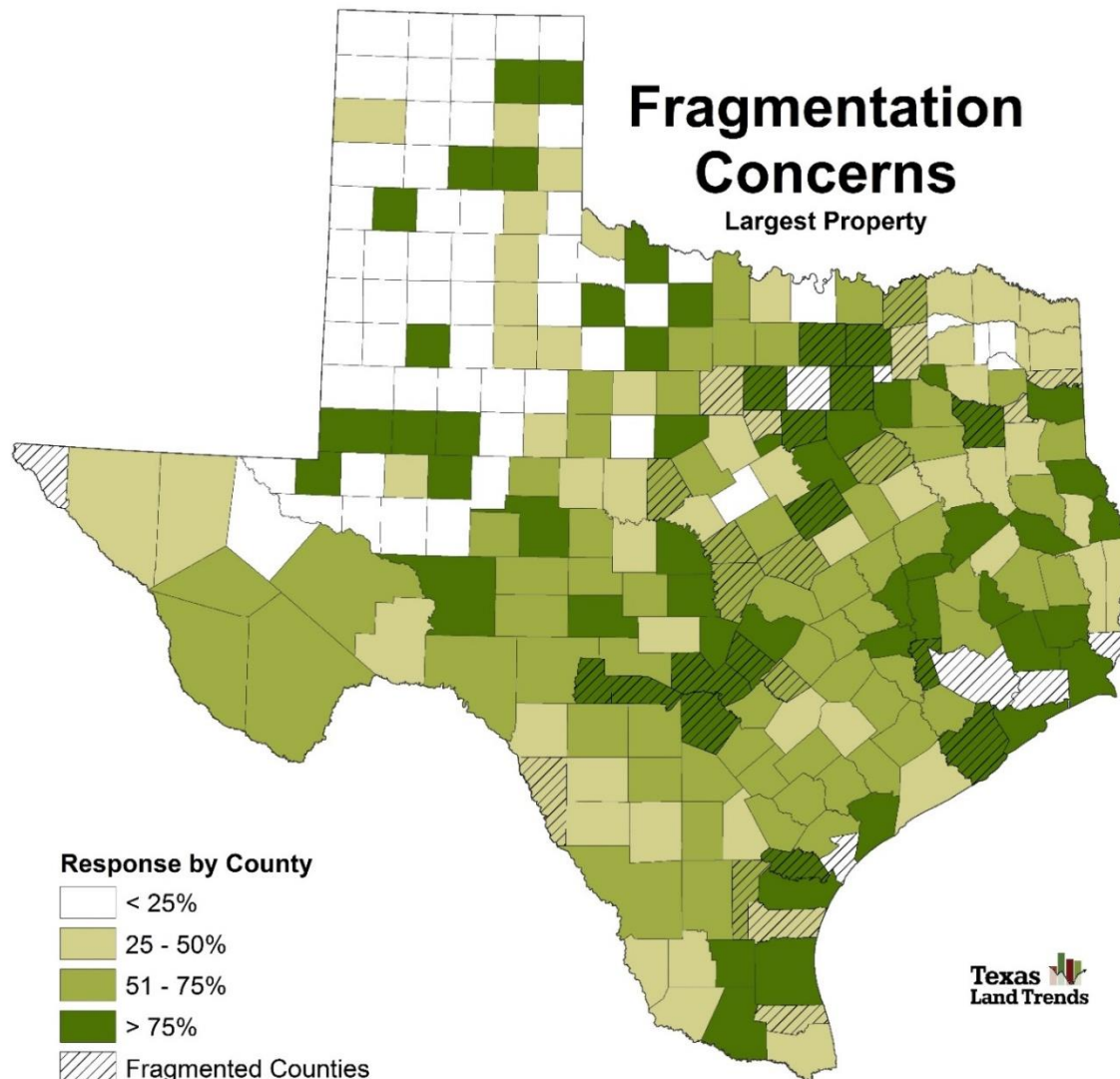


# Farm and Ranch Proceeds – *Driver*

Net Farm and Ranch Proceeds by Ownership Size, 2012

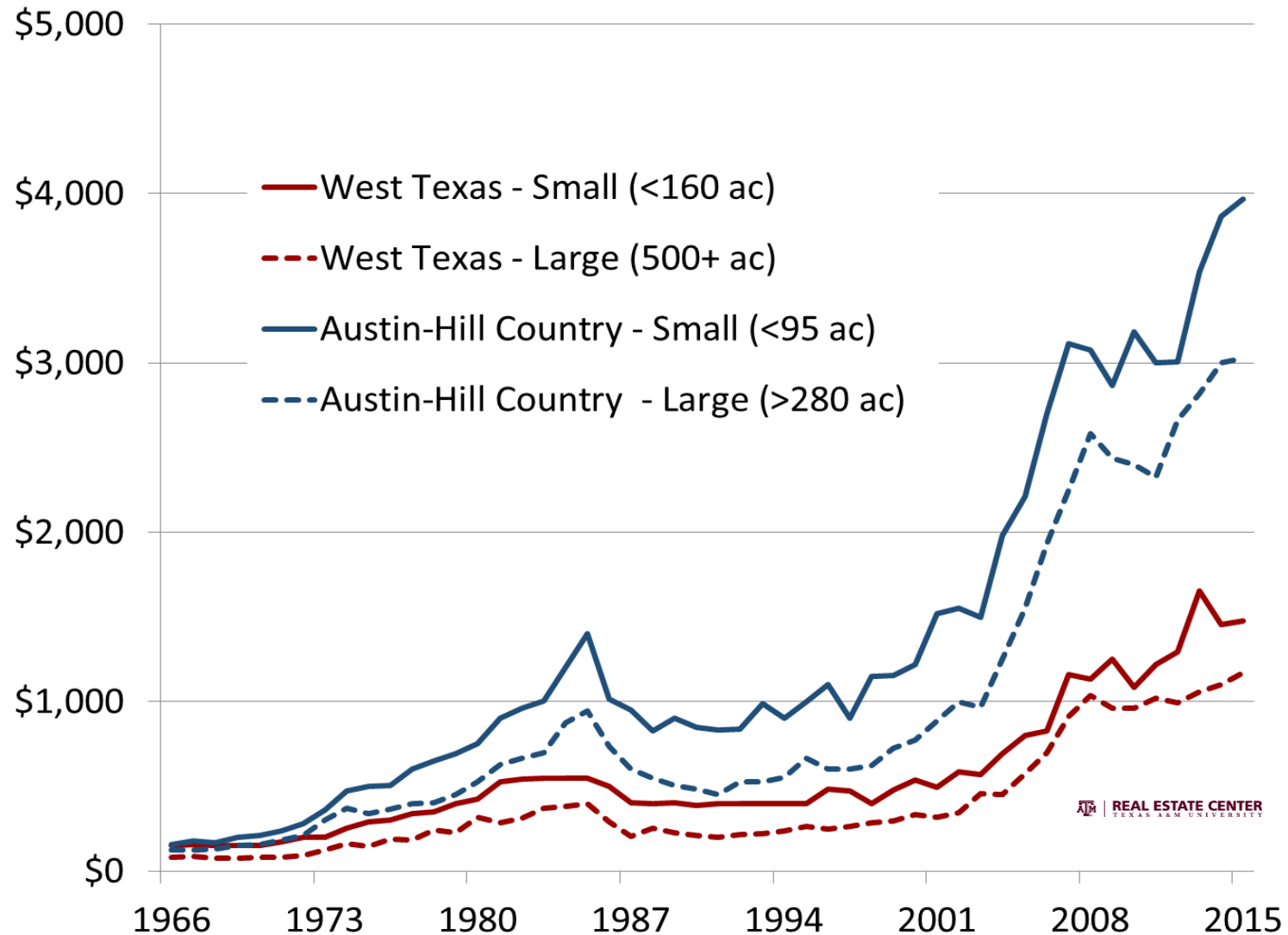


# Landowners – *Fragmentation Concerns*





# Rural Land Trend Prices (Small vs. Large)

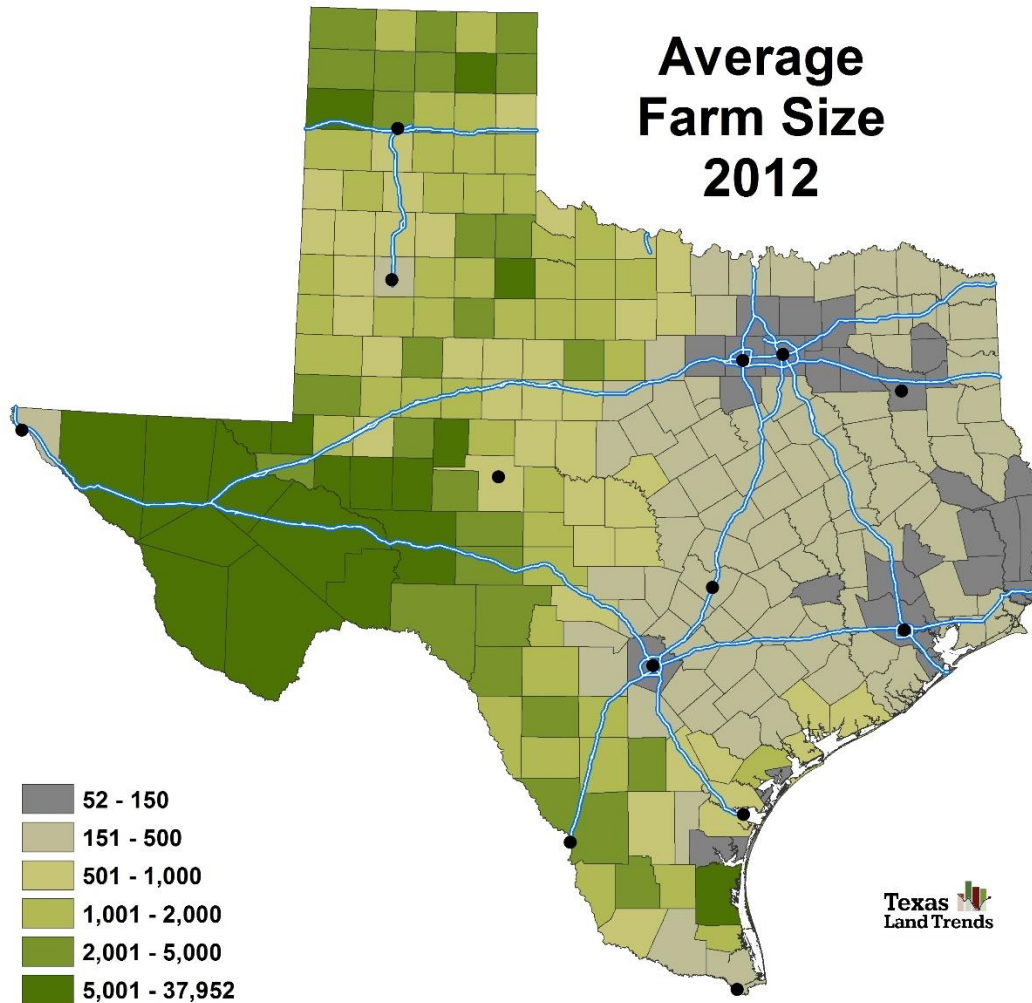


REAL ESTATE CENTER  
TEXAS A&M UNIVERSITY

A wide, straight dirt road stretches from the foreground into the distance, flanked by flat, grassy fields. The sky is filled with large, white, puffy clouds, with some darker patches suggesting shadows or distant storms. The road is a light brown color, and the fields are a mix of green and brown grass. A fence line runs along the sides of the road.

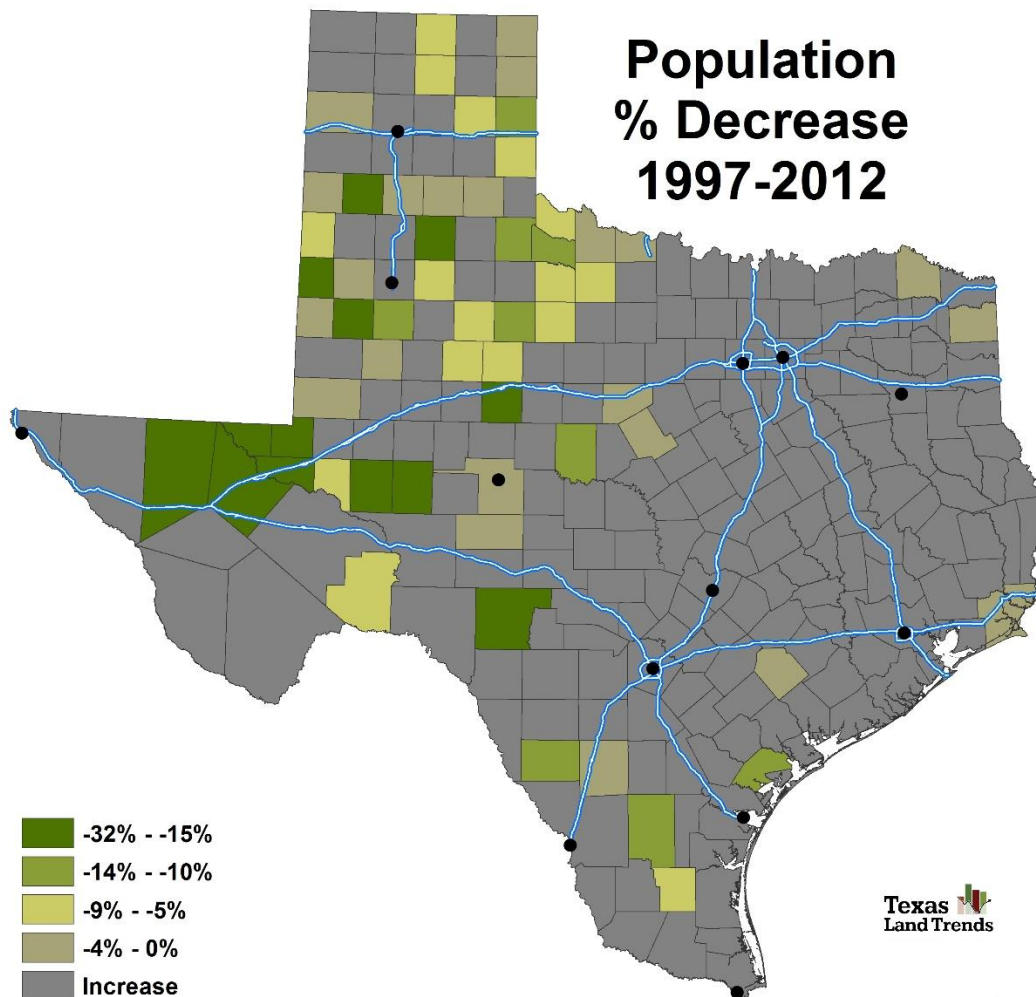
**BUT...Texas still has wide open spaces....**

# Average Farm Size – Top 25 Counties

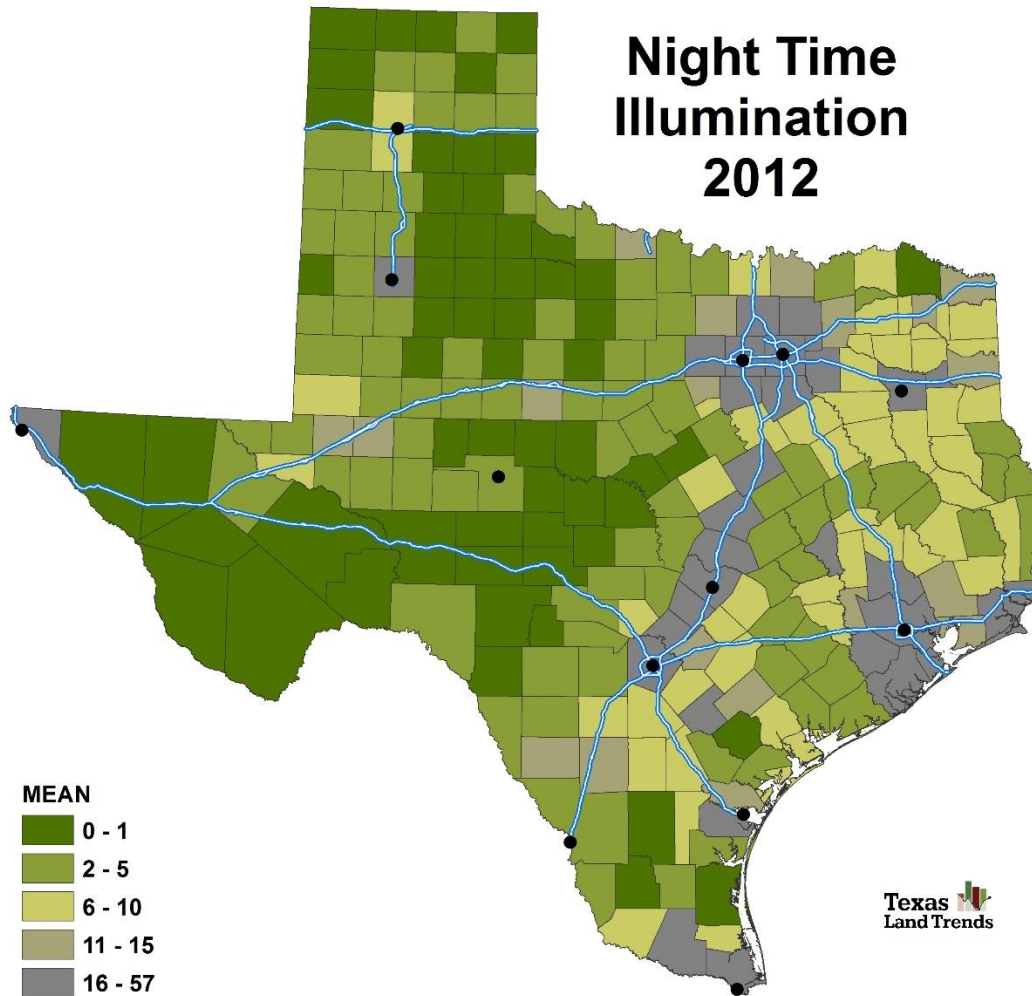




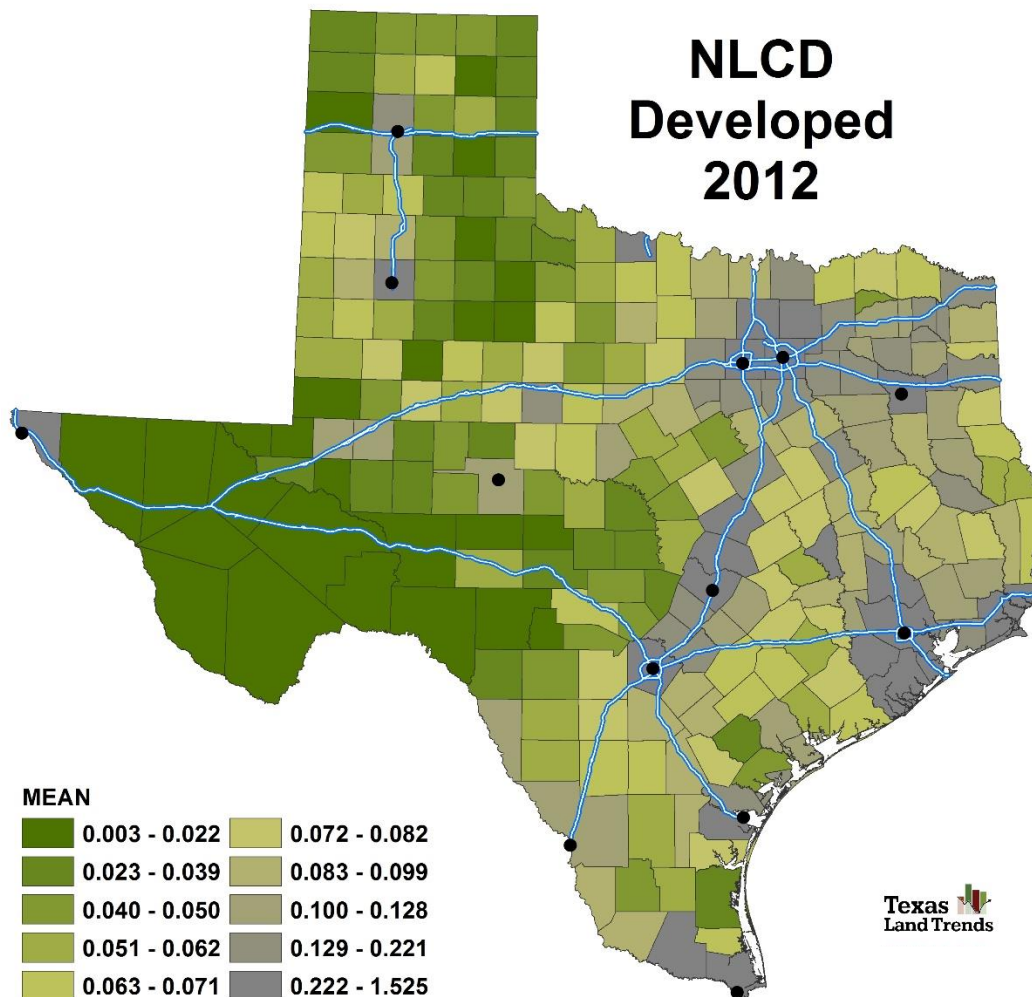
# Population Percent Change – *Top 25 Counties*



# Night Time Illumination – *Top 25 Counties*



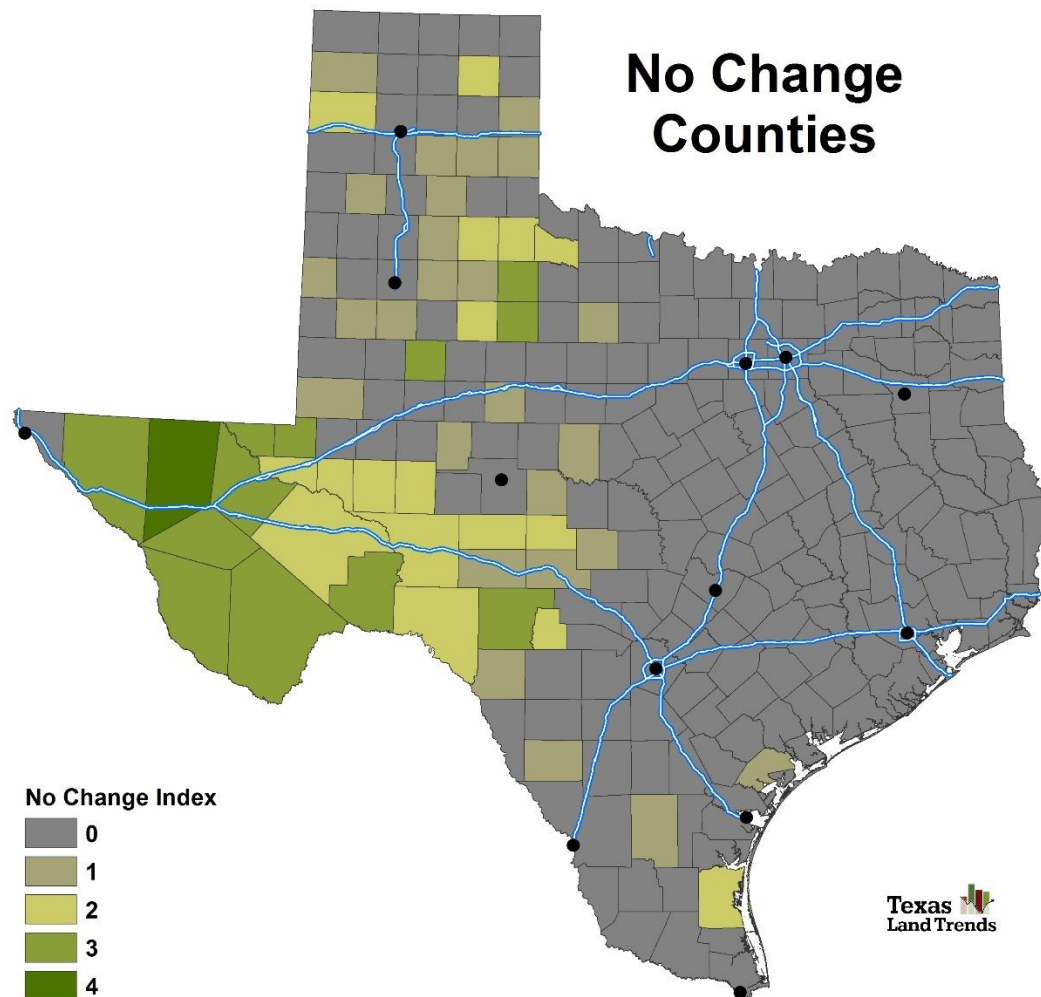
# NLCD Developed Lands – *Top 25 Counties*





# No Change Index – Top 25 Counties

1. Largest average farm/ranches...
2. Largest decrease in population...
3. Lowest night time illumination...
4. Lowest development...

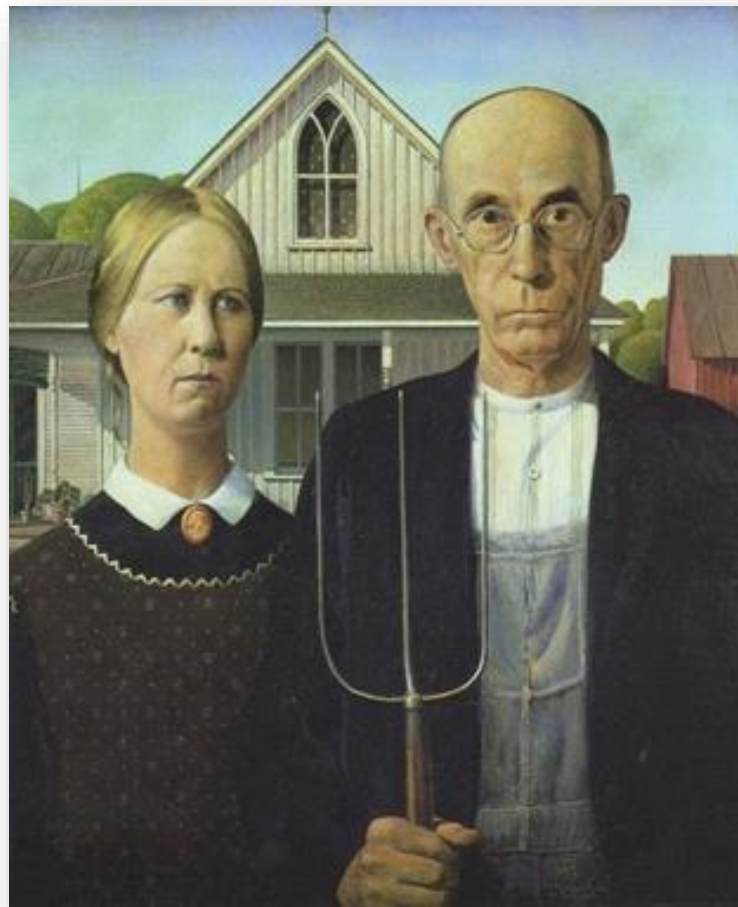


# Changing Landowners....



# Landowner Demographics

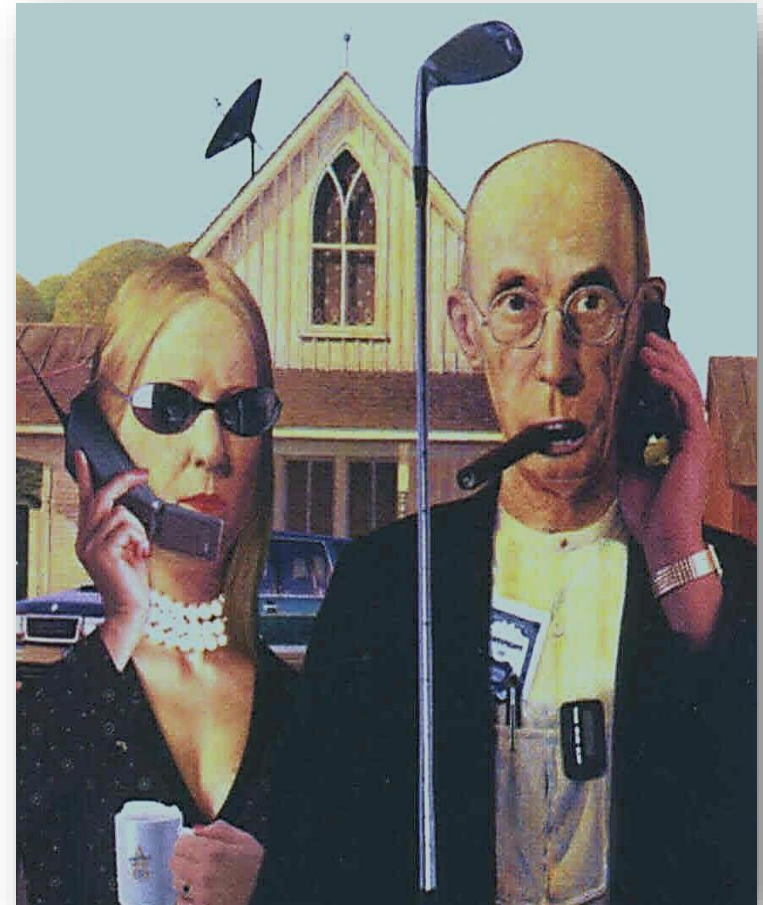
- Average farmer – 57 years old
- Average forest landowner – 65 years old.
- In the next 20 years, U.S. will see the largest intergenerational transfer of rural lands in its history.





# Future Texas Landowner?

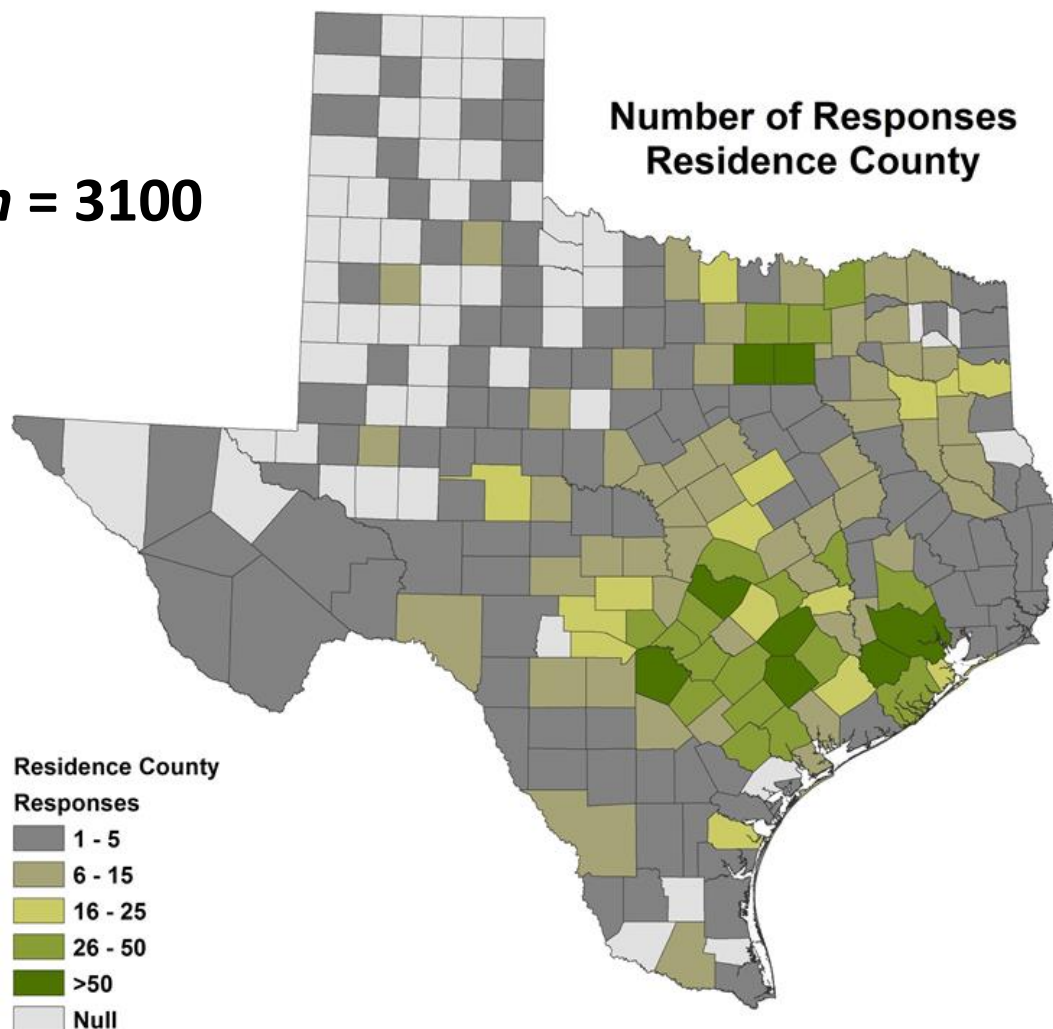
- Younger generation less tied to the land.
- Goals and objectives the same? Concerns?
  - New Ownership (25%)  
Owned <10 years
  - Absentee Ownership (40%)
- Texas Landowner Survey attempts to understand some of these trends.
  - Age, Tie-to-Land, Purpose



# Questionnaire Overview

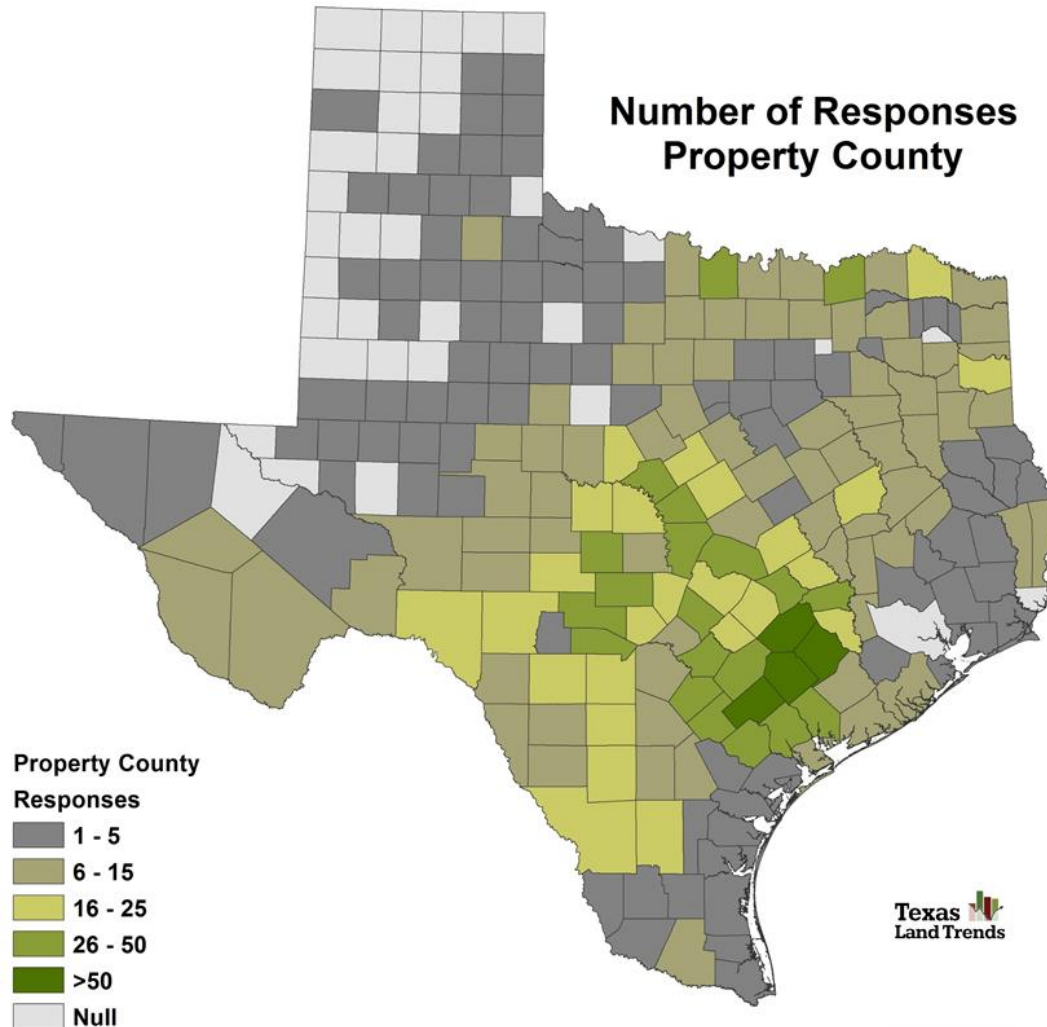
**$n = 3100$**

Number of Responses  
Residence County



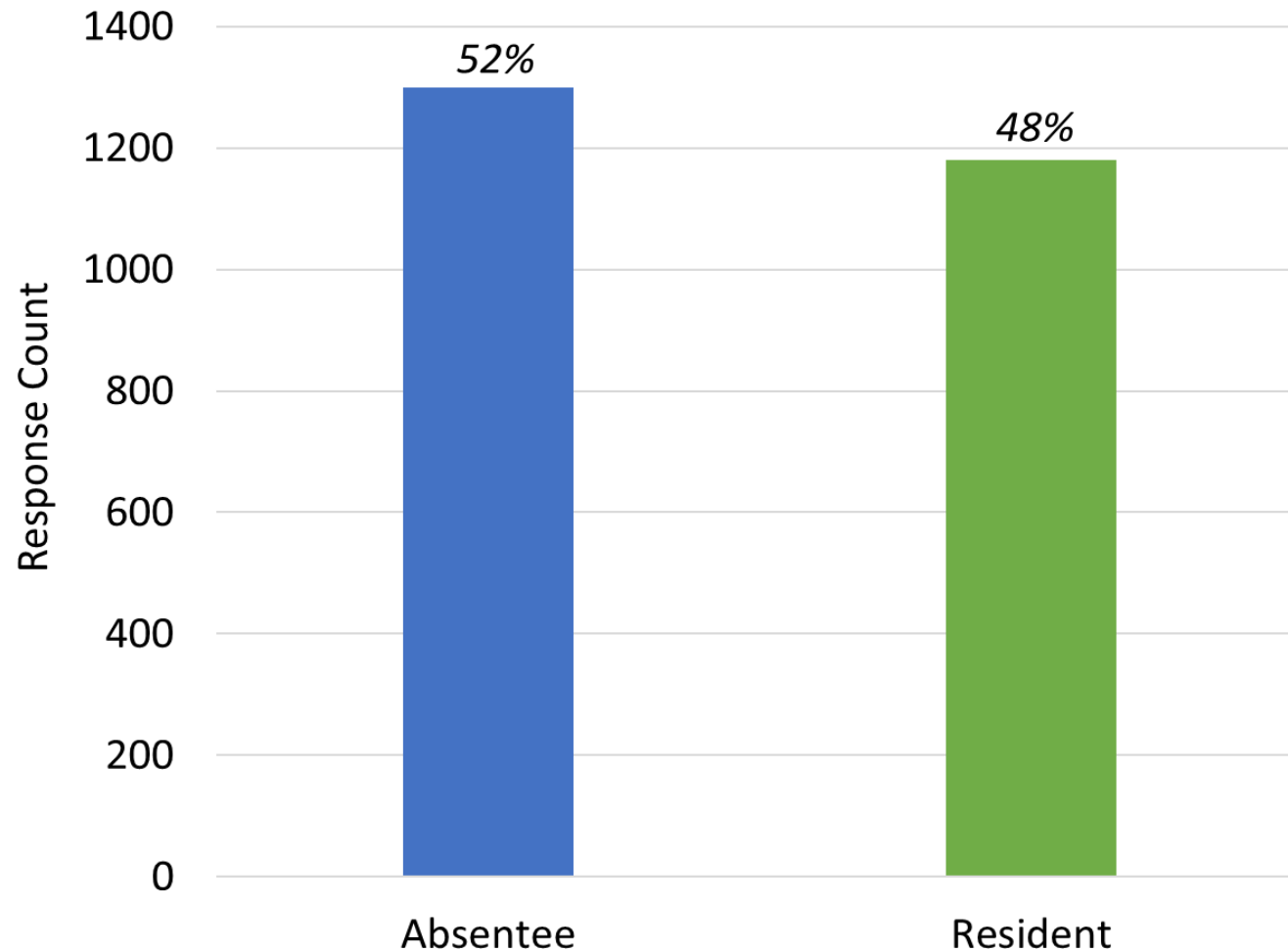
- Web-based questionnaire
  - Goal: Better serve landowners/meet needs
- Divided into 4 topic areas:
  - Landowner demographics
  - Land management
  - Landowner concerns
  - Land Loss/Fragmentation
- Almost all Texas counties (84%) represented

# County of Largest Property

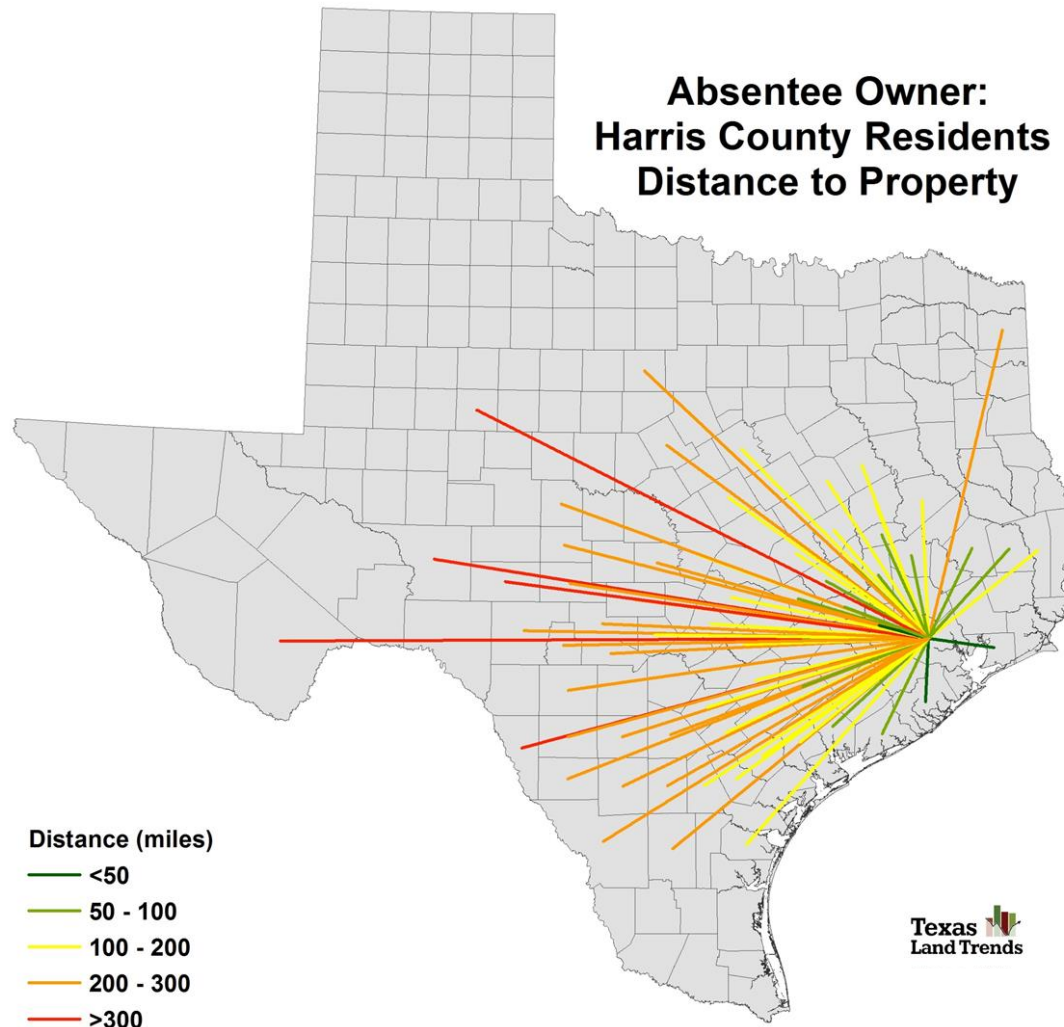




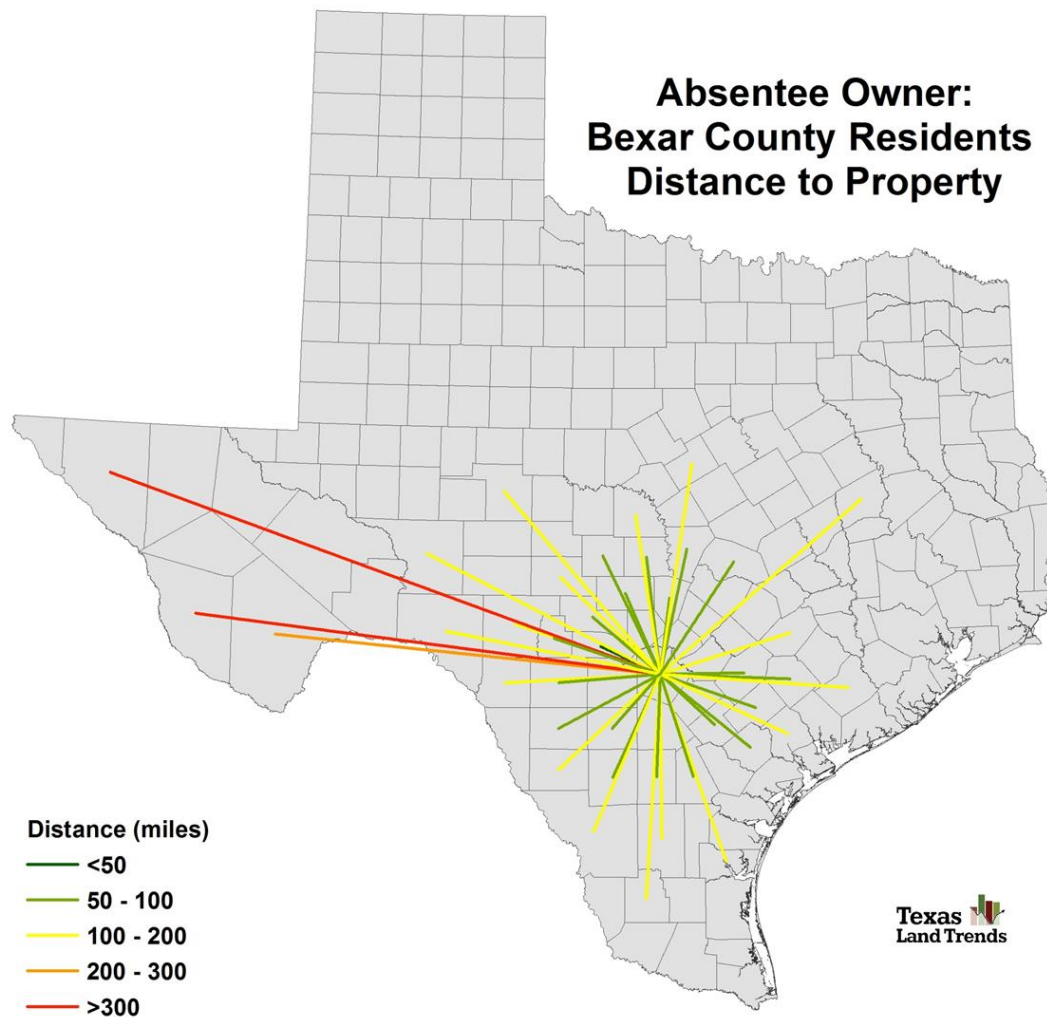
# Questionnaire Responses by Type



# Average Distance from Houston

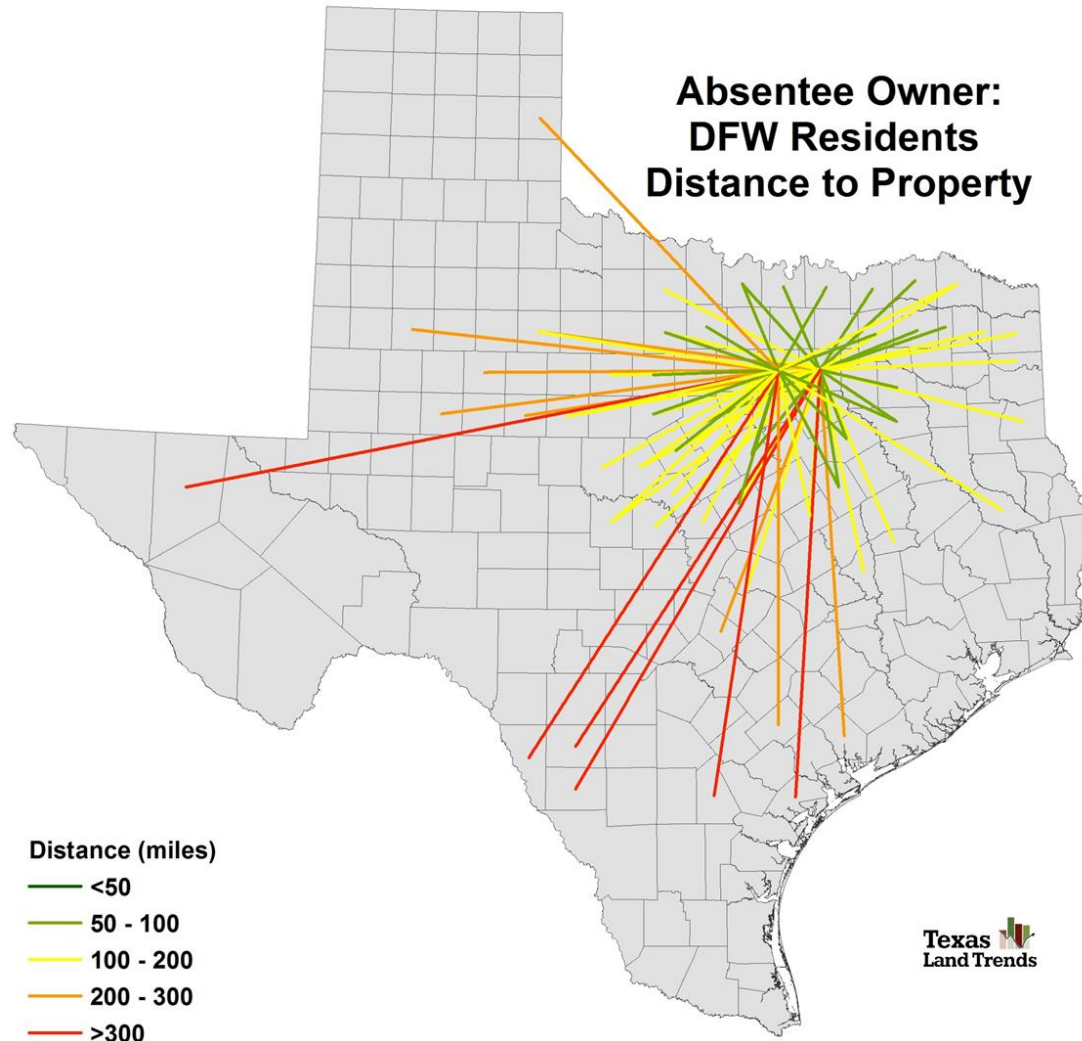


# Average Distance from San Antonio

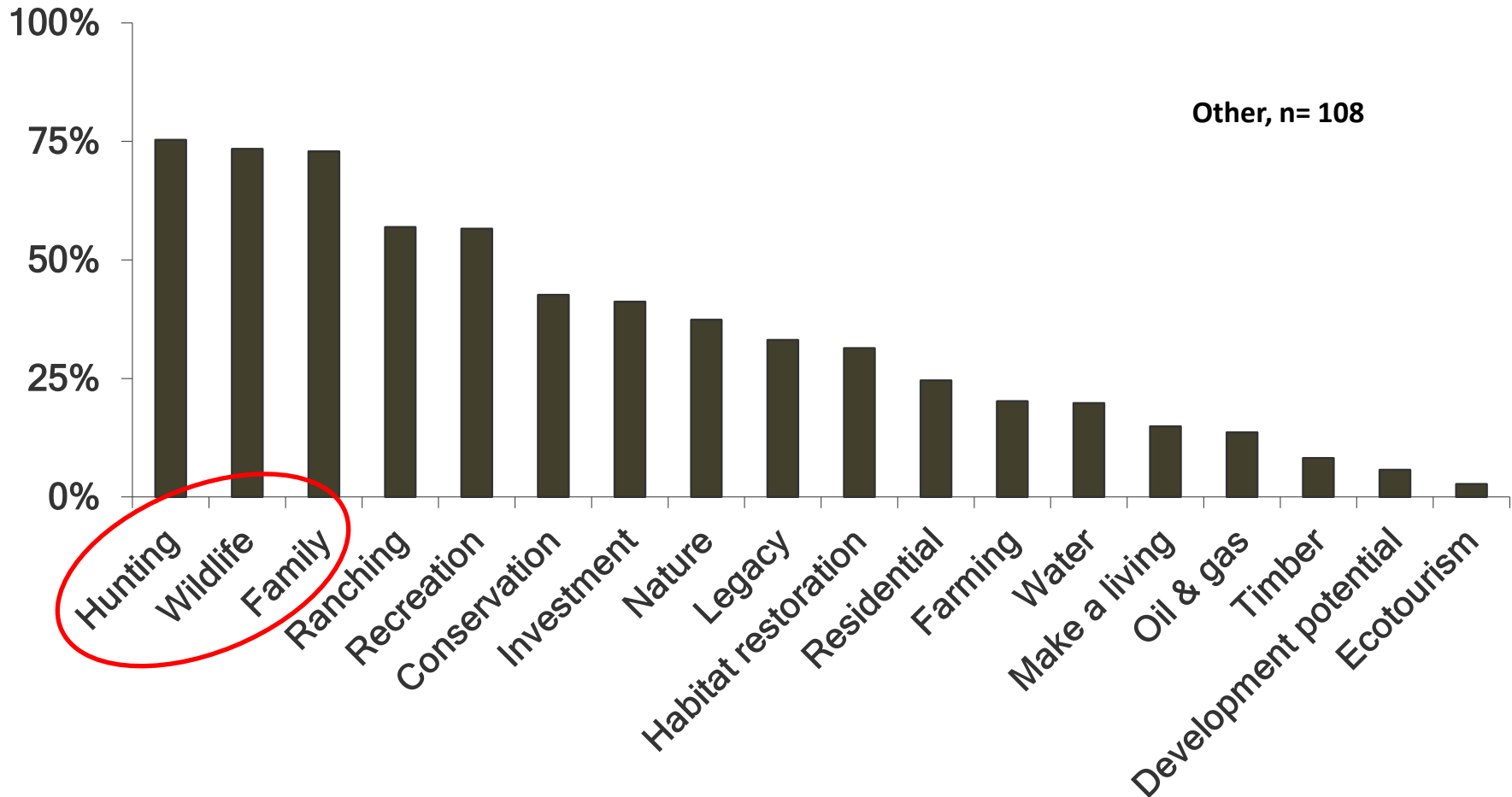




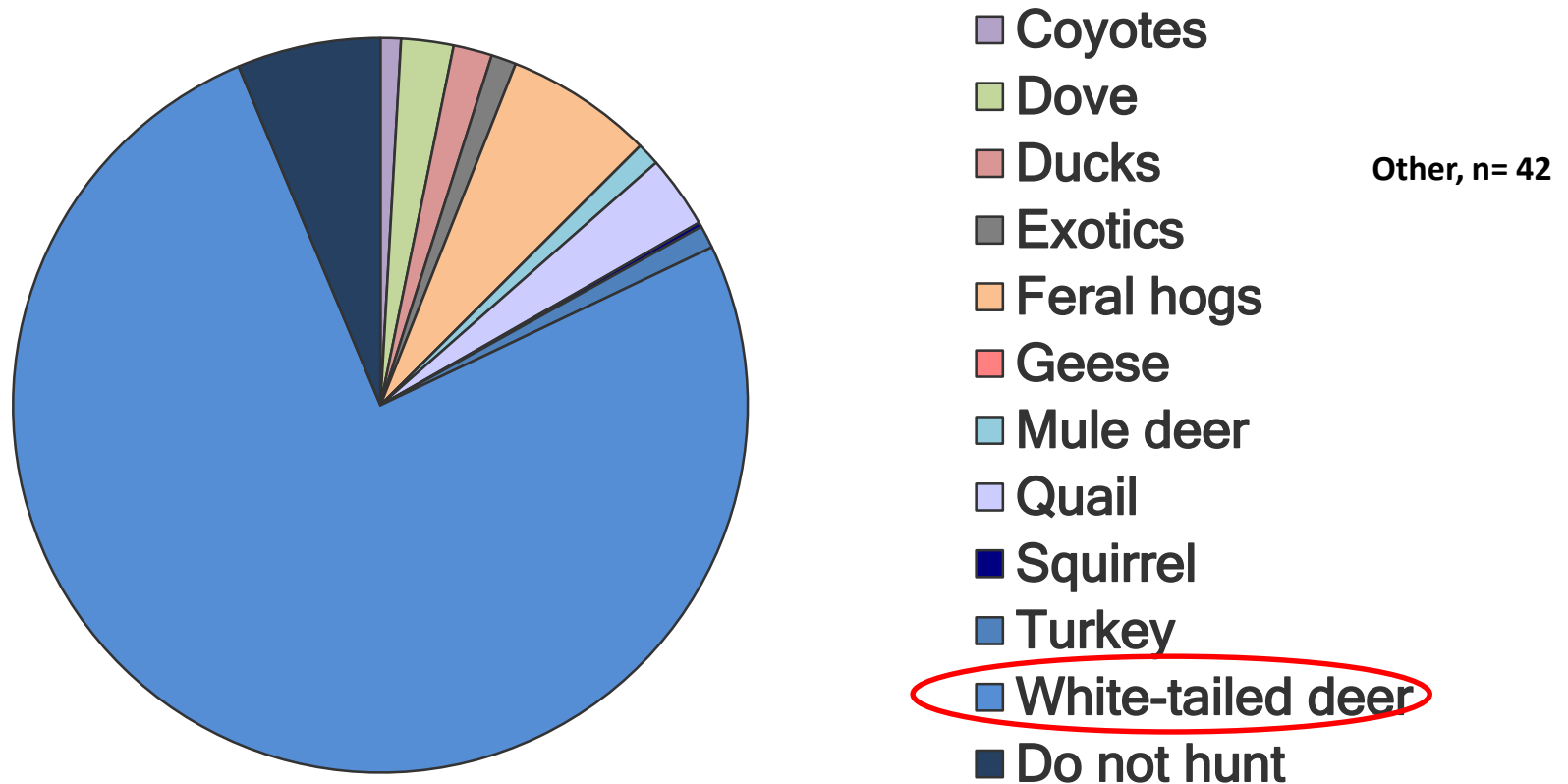
# Average Distance from Dallas-Ft Worth



# Which of the following reasons for owning land apply to you?



# Primary wildlife species of interest?

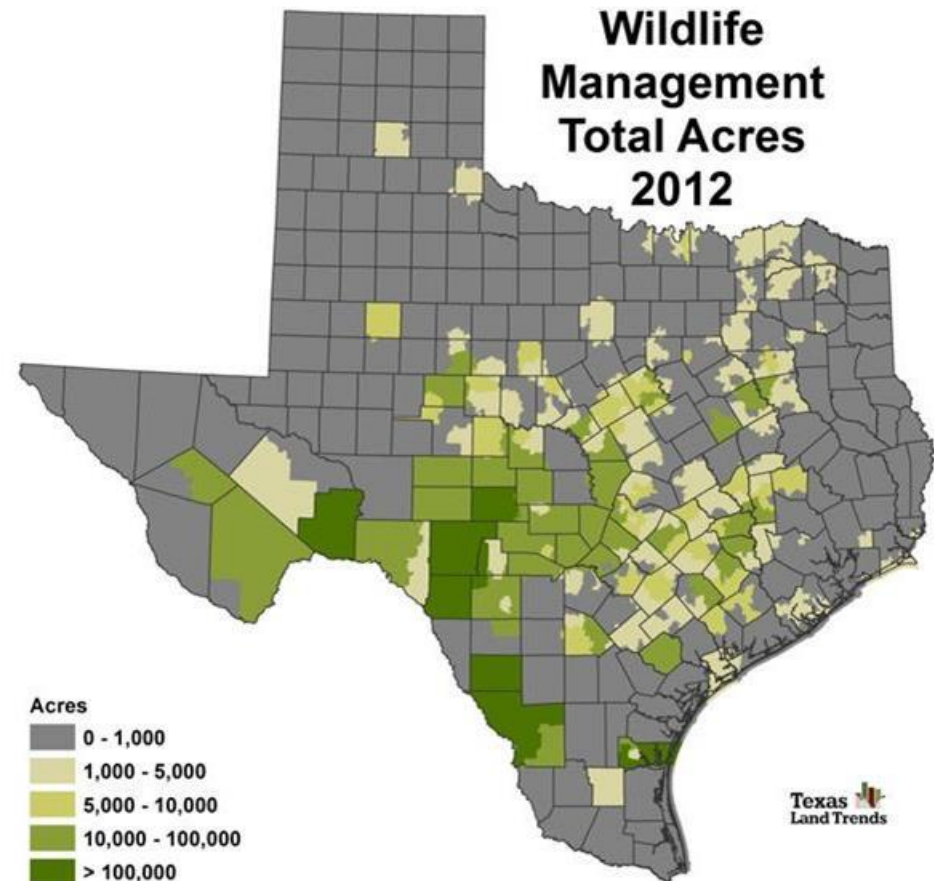
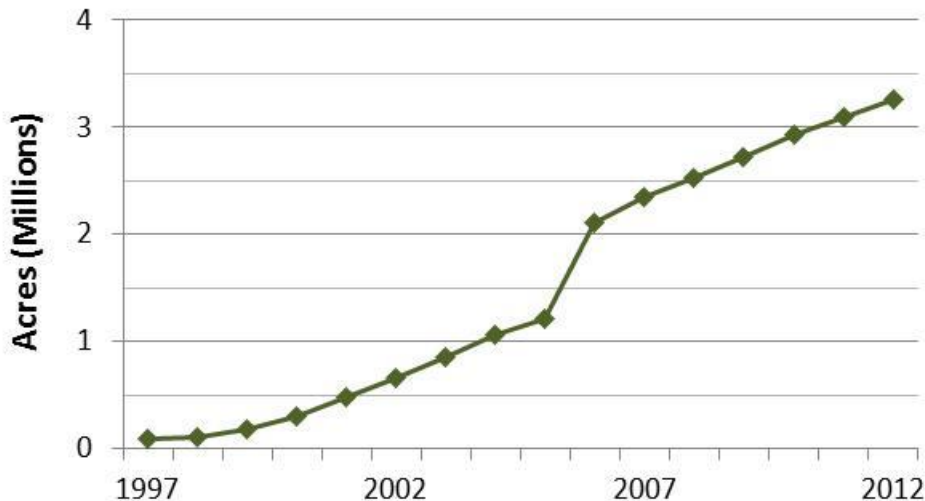




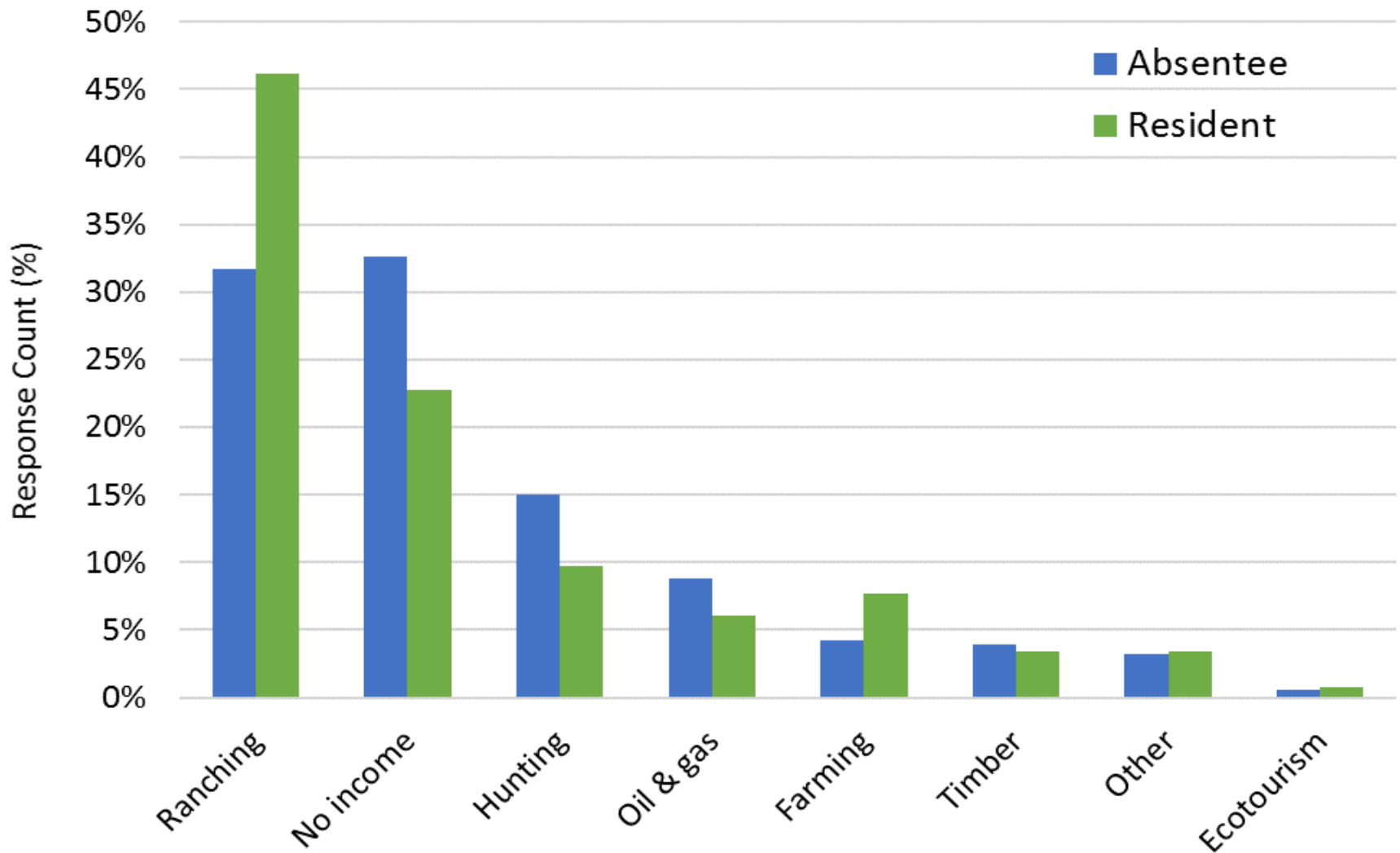
# Wildlife Valuation Trends

- 1997 – 92K acres
- 2012 – 3.3 Million acres
- Gain of 3.2 Million acres

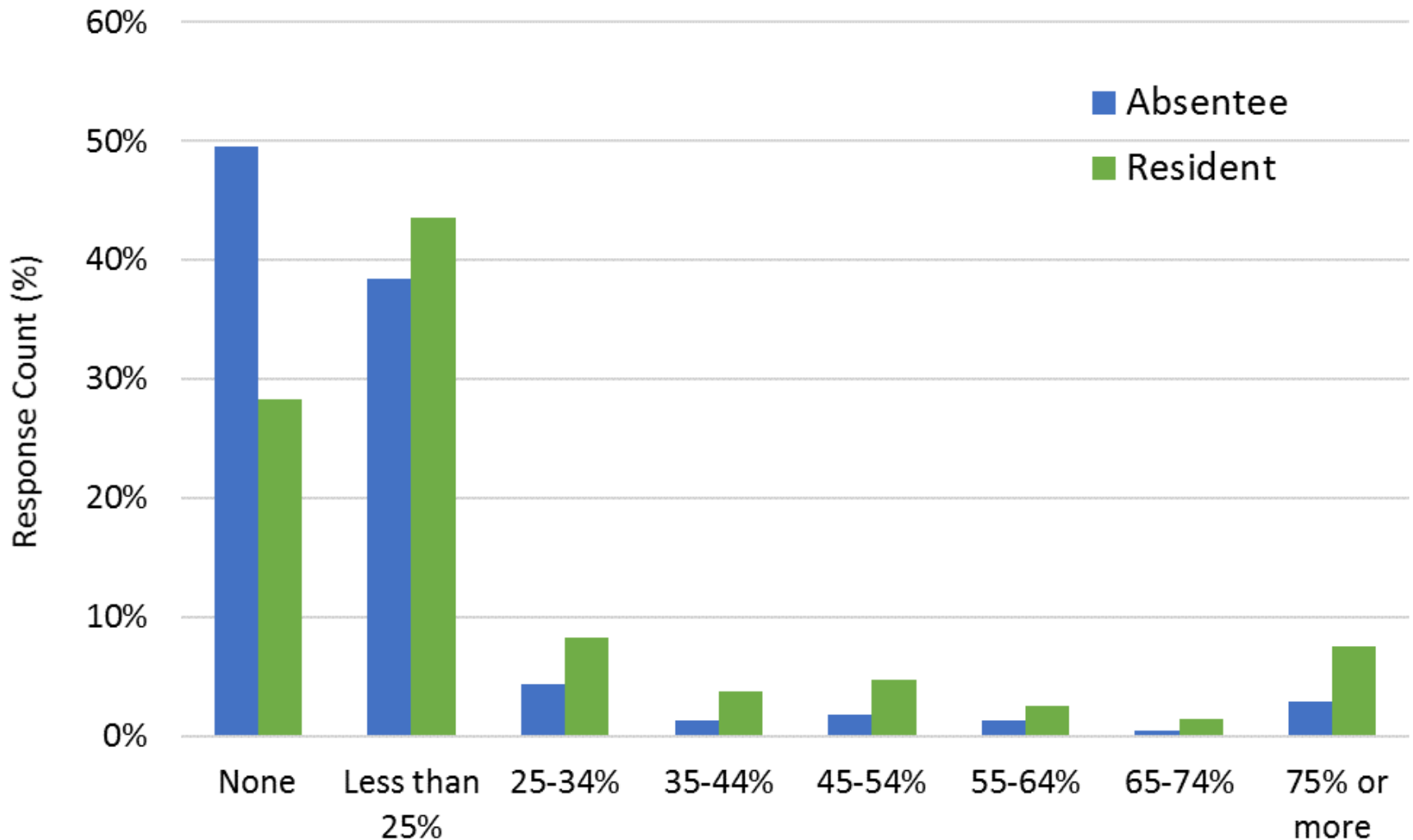
Total Wildlife Management



# Sources of income from property?

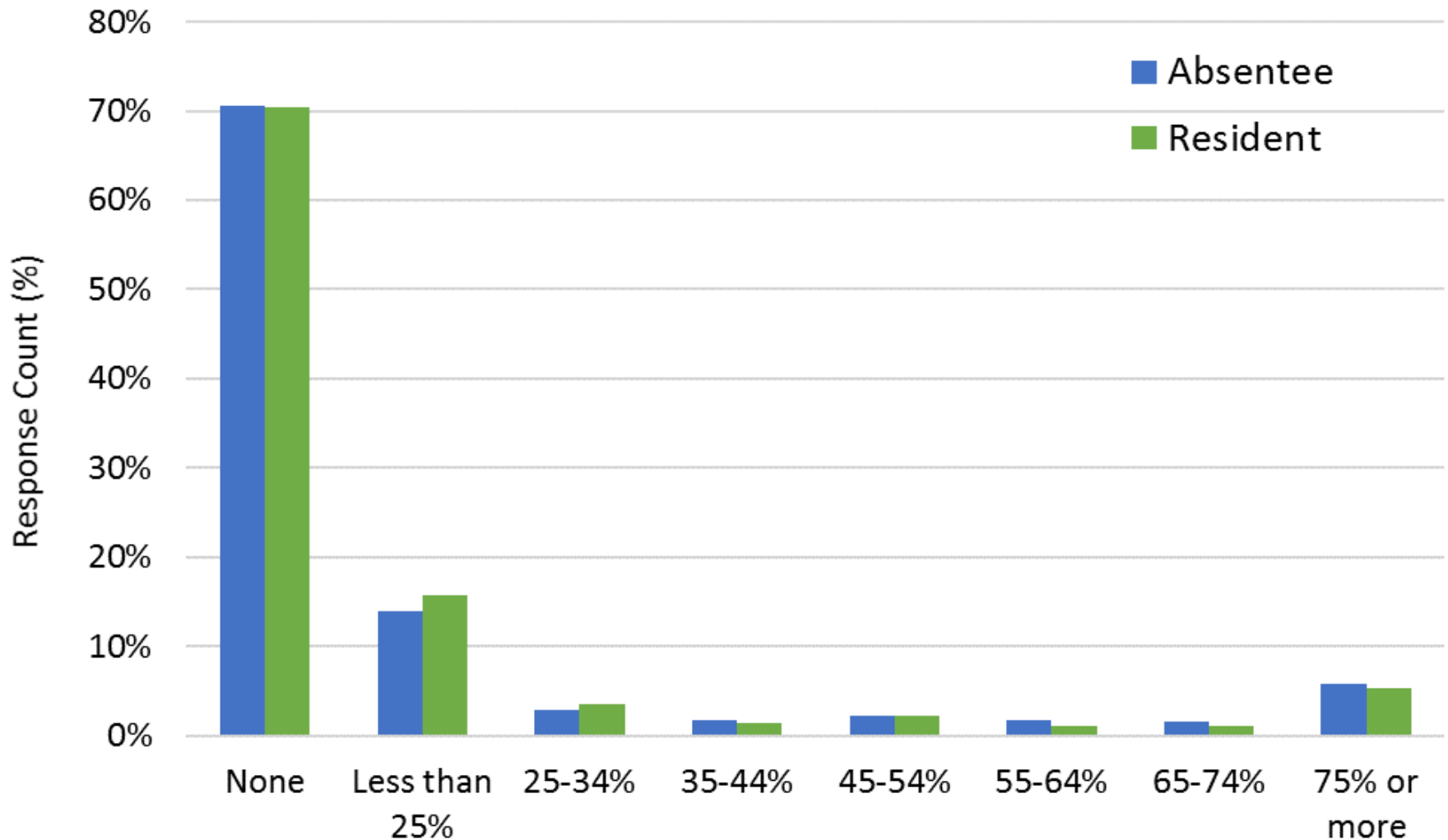


# How much of annual income (%) from property?

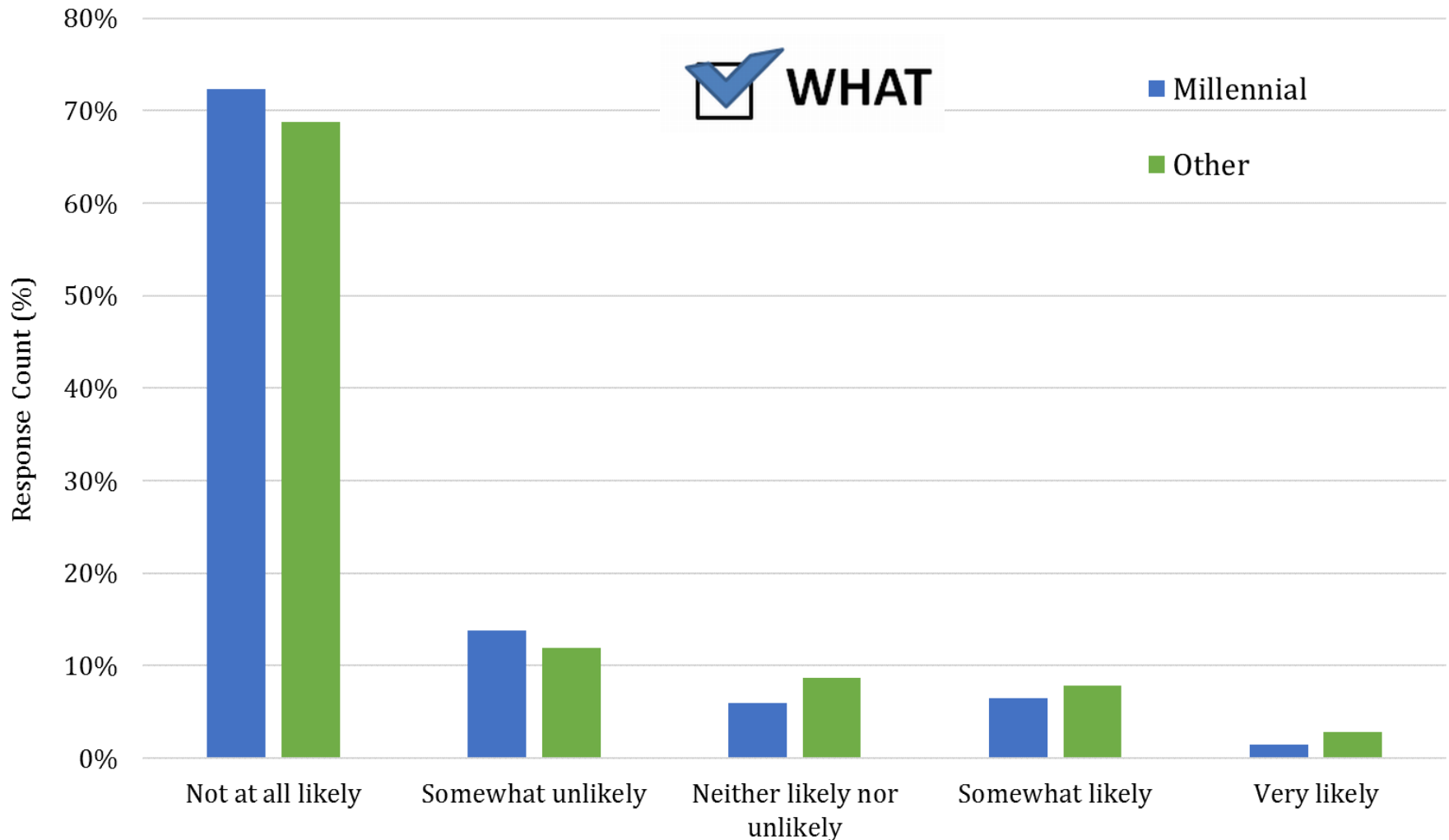




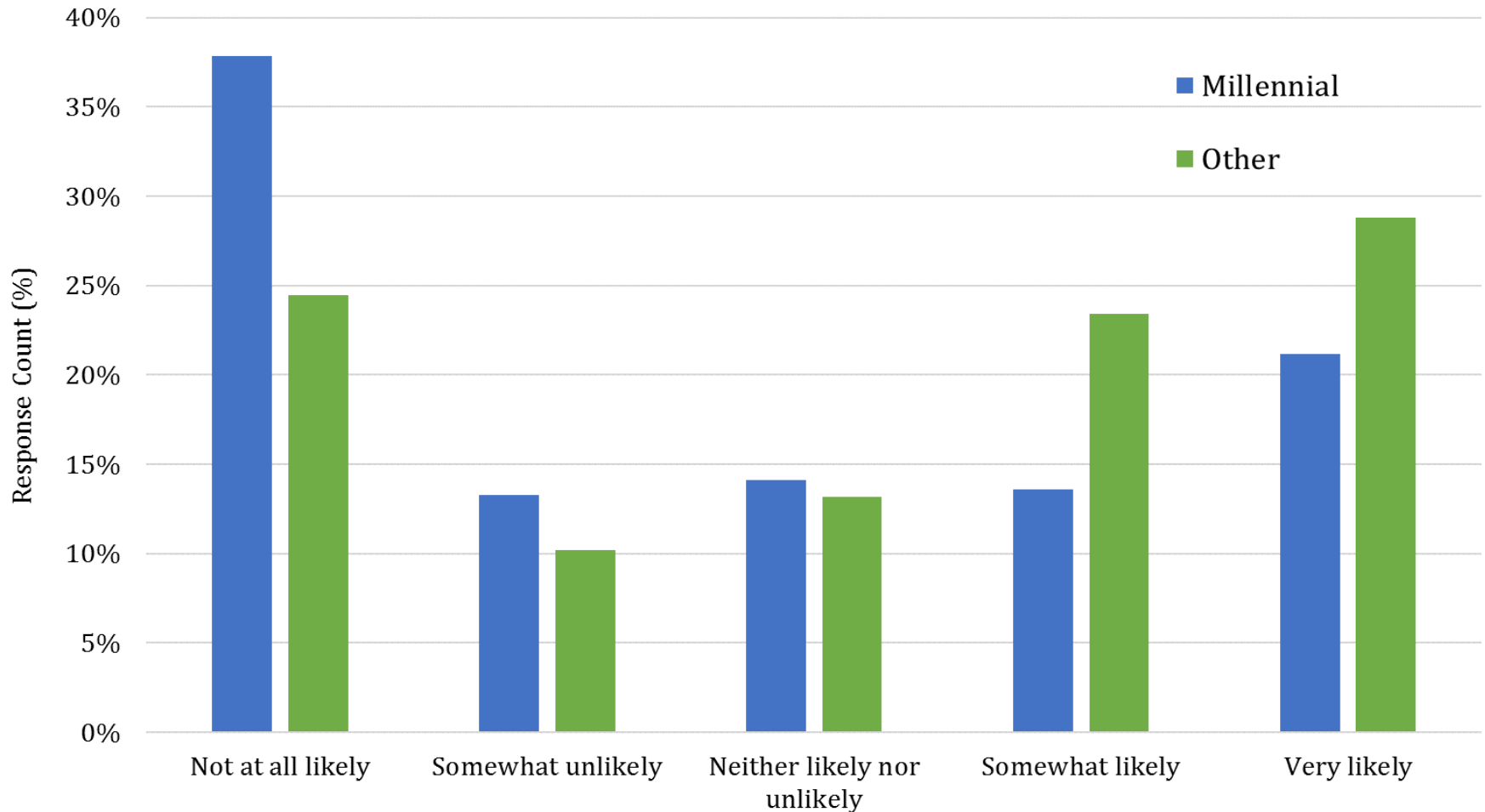
# How much of property income (%) from wildlife?



# In the next 10 years, how likely are you to... ...sell your land?

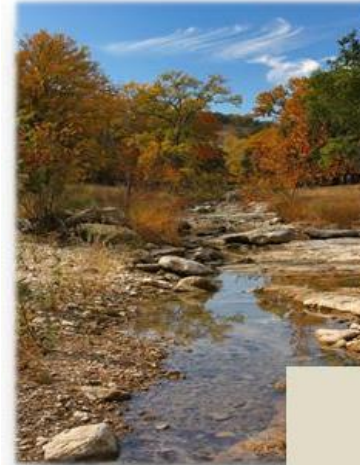


# In the next 10 years, how likely are you to... ...transfer your land to family/loved one?



# Final Thoughts...

- **More People** – Increasing human population, shifts in ethnicity and urban residents.
- **Impacts to Farms and Ranches** – Loss of working lands, fragmentation and conversion BUT not in all places...
- **Changing Landowner Perspectives** – Aging landowners, different objectives, largest intergenerational transfer.
- Communicate the *public* benefits of *private lands*...





# ***Promoting Private Lands Stewardship through Research, Education, and Policy.***



**<http://nri.tamu.edu/>**  
**<http://txlandtrends.org/>**

**Roel R. Lopez**  
roel@tamu.edu