



# Oklahoma's Feral Swine Program

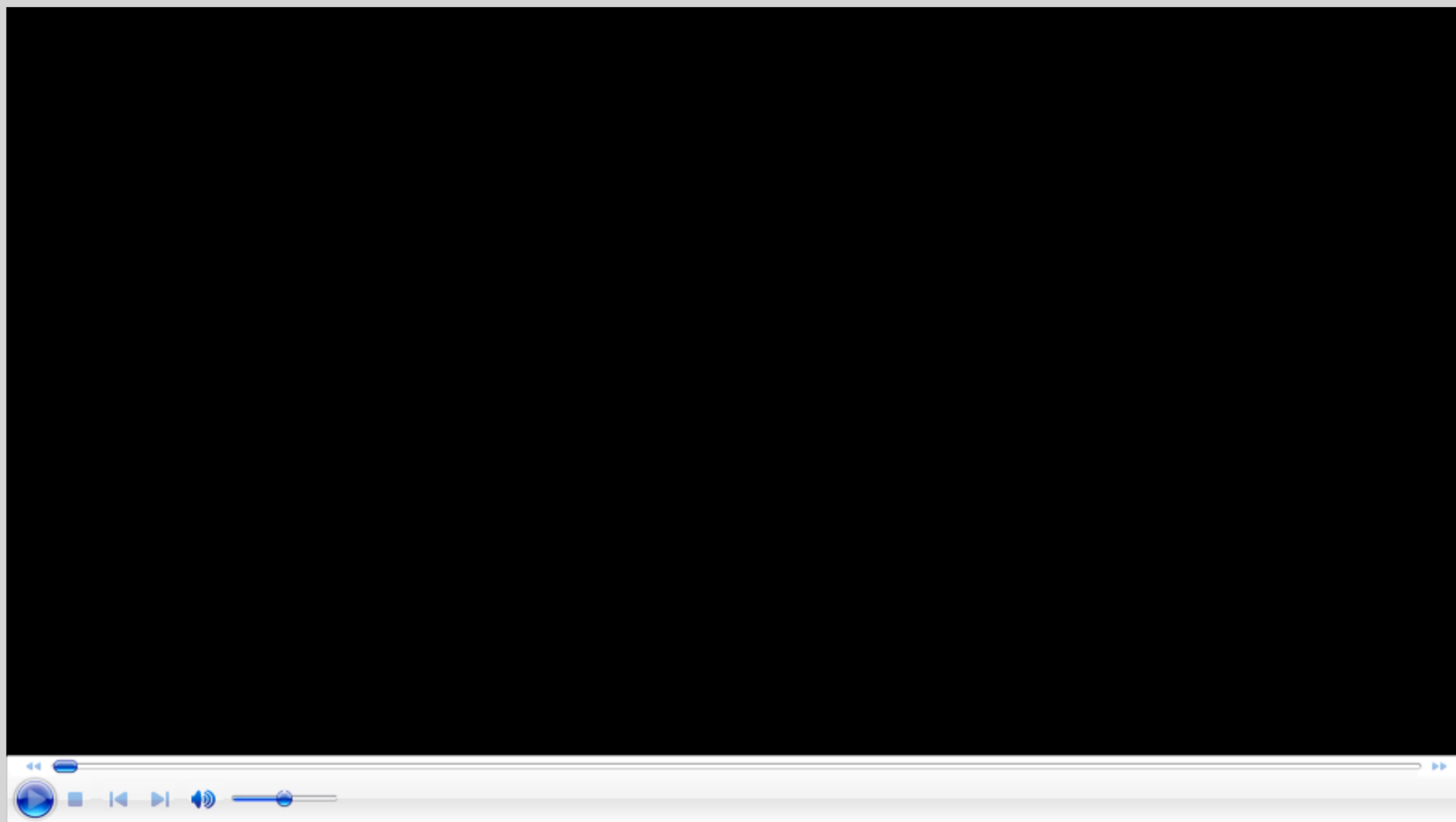
Oklahoma Department of Agriculture,  
Food and Forestry

*Wildlife Services Division*



# Personal Experiences

## J.C. Goyer, Luther, Okla.





# What is the problem?







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# What is the problem?

- Competition with native wildlife, prey on some
- Nose-to-nose contact with livestock and pets





# What is the problem?

- Pollute and degrade water quality (feces)
- Negatively impact ecosystems and wildlife habitats
- Increase soil erosion and decrease soil quality
- Wallows attract mosquitoes which then spread disease







# Diseases and Sicknesses of Feral Swine

[Abscesses](#)  
[Muscle Tearing](#)  
[Actinobacillosis](#)  
[Mycoplasma Arthritis](#)  
[Actinobacillus Pleuropneumonia \(App\)](#)  
[Mycotoxiosis](#)  
[Agalactia](#)  
[Navel Bleeding](#)  
[Anaemia](#)  
[Nipah virus disease](#)  
[Anthrax](#)  
[Non-Antibiotic Growth Promoters](#)  
[Arthritis, joint infections](#)  
[Oedema Disease](#)  
[Atresia Ani - No Anus or No Rectum](#)  
[Osteochondrosis, OCD](#)  
[Atrophic Rhinitis \(AR\)](#)  
[Osteodystrophy](#)  
[Aujeszky's disease AD,](#)  
[Osteomalacia](#)  
[Back Muscle Necrosis](#)  
[Osteoporosis](#)  
[Biotin Deficiency](#)  
[Pale Pig Syndrome](#)  
[Blue Eye Disease](#)  
[Pasteurellosis \(\*Pasteurella multocida\*\)](#)  
[Border Disease \(BD\)](#)  
[Penis Bleeding](#)  
[Bordetellosis \(\*Bordetella bronchiseptica\*\)](#)  
[Peritonitis](#)  
[Borna Disease](#)  
[Pneumonia](#)  
[Botulism](#)  
[Streptococcal Infections](#)  
[Greasy Pig Disease](#)  
[Streptococcal Meningitis](#)  
[Haematoma](#)  
[Swine Dysentery](#)  
[Hepatitis E Virus](#)

[Porcine Cytomegalovirus Infection \(PCMV\)](#)  
[Bovine \(Porcine\) Spongiform Encephalopathy \(BSE\)](#)  
[Porcine Dermatitis and Nephropathy Syndrome \(PDNS\)](#)  
[Bovine Viral Diarrhoea Virus \(BVD\)](#)  
[Porcine Enteropathy](#)  
[Brucellosis](#)  
[Porcine Epidemic Diarrhoea \(PED\)](#)  
[Bursitis](#)  
[Porcine Parvovirus Infection \(PPV\)](#)  
[Bush Foot, Foot Rot](#)  
[Porcine Reproductive & Respiratory Syndrome \(PRRS\)](#)  
[Campylobacter](#)  
[Porcine Respiratory Corona Virus Infection \(PRCV\)](#)  
[Clostridial Diseases](#)  
[Porcine Spongiform Encephalopathy \(PSE\)](#)  
[Coccidiosis \(Coccidia\)](#)  
[Porcine Stress Syndrome \(PSS\)](#)  
[Colitis](#)  
[Post Weaning Multisystemic Wasting Syndrome \(PMWS\)](#)  
[Congenital Tremor \(CT\) - Shaking Piglets](#)  
[Prepuccial Ulceration](#)  
[Cryptosporidiosis](#)  
[Progressive Atrophic Rhinitis \(PAR\)](#)  
[Cystic Ovaries](#)  
[Prolapse of the Bladder](#)  
[Cystitis and Pyelonephritis](#)  
[Prolapse of the Rectum](#)  
[Dipped Shoulder \(Humpy Back, Kinky Back, Kyphosis\)](#)  
[Prolapse of the Uterus](#)  
[E. coli - Scour \(Diarrhoea\)](#)  
[Prolapse of the Vagina and Cervix](#)  
[E.coli Diarrhoea](#)  
[Pseudorabies PR](#)  
[Glässers Disease Swine Fevers: African, Classical, Hog Cholera](#)  
[Udder Oedema, Failure of Milk Let Down](#)  
[Leptospirosis](#)  
[Vesicular Exanthema](#)  
[Listeriosis](#)  
[Vesicular Stomatitis](#)  
[Lymphosarcoma](#)  
[Salt Poisoning, Water Deprivation](#)

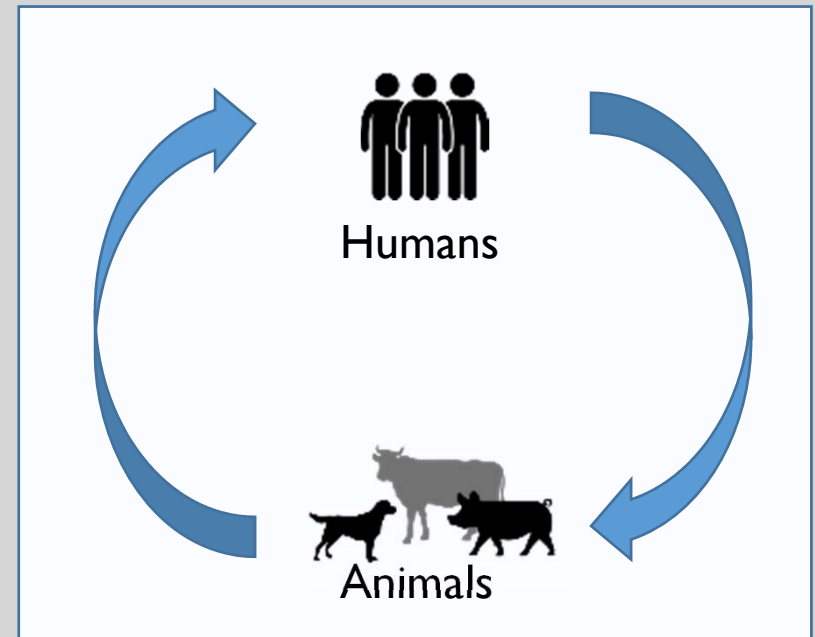
[Eclampsia](#)  
[Rabies](#)  
[Electrocution](#)  
[Rectal Stricture](#)  
[Encephalomyocarditis](#)  
[Reproduction](#)  
[Endometritis](#)  
[Retroviruses](#)  
[Enteroviruses, SMEDI](#)  
[Rotavirus Infection](#)  
[Enzootic Pneumonia \(EP\)](#)  
[Ruptured Blood Vessel](#)  
[Eperythrozoonosis](#)  
[Ruptures, Hernias](#)  
[Salmonellosis](#)  
[Erysipelas](#)  
[Exudative Epidermitis](#)  
[Savaging of Piglets \(Cannibalism\)](#)  
[Fever](#)  
[Scour \(\*E. coli\*\)](#)  
[Foot-and-Mouth Disease](#)  
[Seasonal Infertility](#)  
[Fractures](#)  
[Shoulder Sores](#)  
[Frostbite](#)  
[Spirochaetal Diarrhoea](#)  
[Gastric Ulcers](#)  
[Splaylegs](#)  
[Getah Viruses](#)  
[Hps - \(\*Haemophilus Parasuis\*\)](#)  
[Swine Influenza Virus \(SI\), Flu](#)  
[Hypoglycaemia](#)  
[Swine Pox](#)  
[Ileitis \(\*Lawsonia intracellularis\*\)](#)  
[Swine Vesicular Disease \(SVD\)](#)  
[Inherited Thick Legs, Hyperostosis](#)  
[Teat Necrosis](#)  
[Internal Parasites \(Worms etc.\)](#)  
[Teschen Disease](#)

[Tetanus](#)  
[Japanese B Encephalitis Virus \(JE\)](#)  
[Thin Sow Syndrome](#)  
[Jaw and Snout Deviation](#)  
[Thrombocytopaenic Purpura, Bleeding](#)  
[Joint Ill in Piglets](#)  
[Torsion of the Stomach and the Intestines](#)  
[Transmissible Gastro Enteritis, TGE](#)  
[Laminitis](#)  
[Tuberculosis](#)  
[Leg Weakness](#)  
[Vulval Biting](#)  
[Mange Mites, Sarcoptes](#)  
[Scabiei](#)  
[Vulval discharge syndrome](#)  
[Mastitis](#)  
[Vulval Haematoma](#)  
[Meningitis](#)  
[Worms / Nematodes](#)  
[Metritis](#)  
[Yersina Infection](#)  
[Middle Ear Infections](#)  
[Vice](#)  
[M-Hyo \(\*Mycoplasma Hyopneumoniae\*\)](#)  
[Infection](#)  
[Vomiting, Wasting Disease, Ontario](#)  
[Encephalitis](#)  
[Mammary Hypoplasia, Undeveloped Udder](#)  
[Iron toxicity \(Vitamin E Deficiency\)](#)  
[Epitheliogenesis Imperfecta](#)



# Diseases of Feral Swine

- In 2017, 227 feral swine were tested in 33 locations and 19 counties in Oklahoma.
- Positive: brucellosis, pseudorabies, influenza A and leptospirosis.
- More than 30% carried or had been exposed to a zoonotic disease.
- In a test case of 55, 44% positive for leptospirosis.







# What is the problem?

- Females can farrow two litters a year with four to 10 piglets per litter.
- Migrate up to 19 miles; no “home.”



**43  
Hogs**

**605  
Hogs**

**122,000  
Hogs**



**Year 5**

**Year 10**

**Year 20**



# How many?

- Estimates range from 5 million to 14.5 million in at least 35 states.
- Each feral hog is estimated to cause \$140 of damage.
- Studies show we must eliminate 70% of feral swine population annually just to maintain the current population.

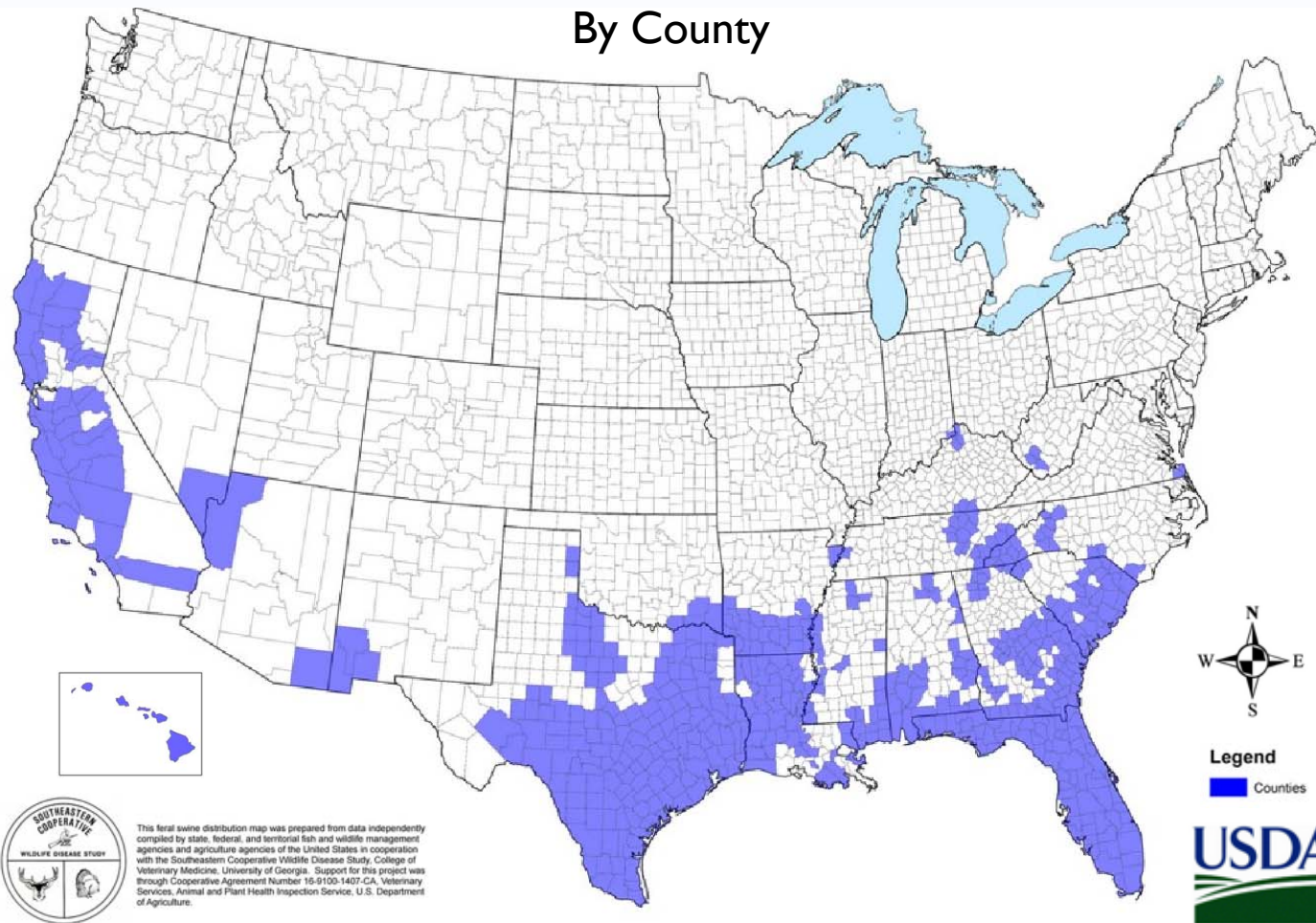






# Progression

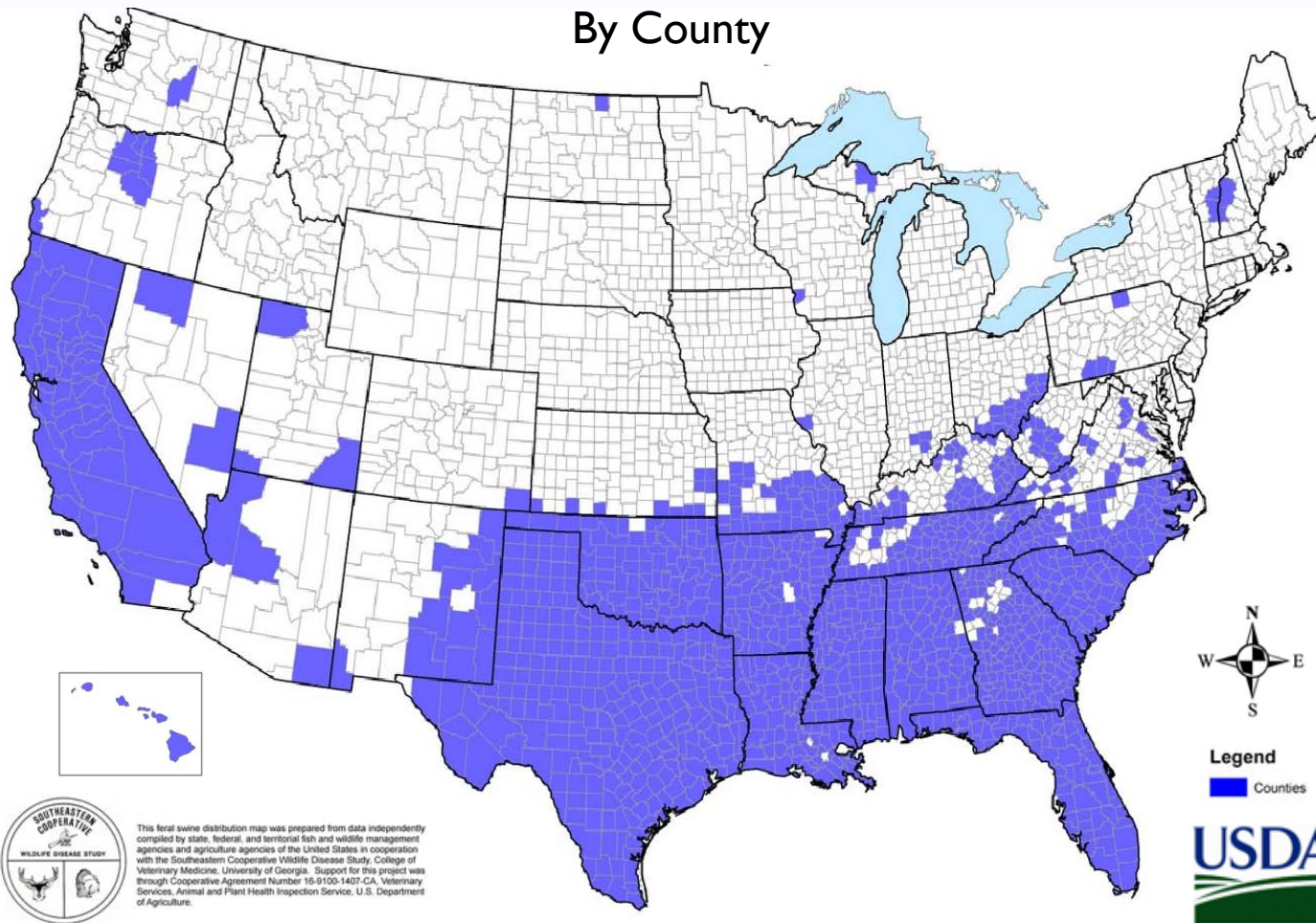
Feral Swine Population 1982  
By County





# Progression

Feral Swine Population 2017  
By County

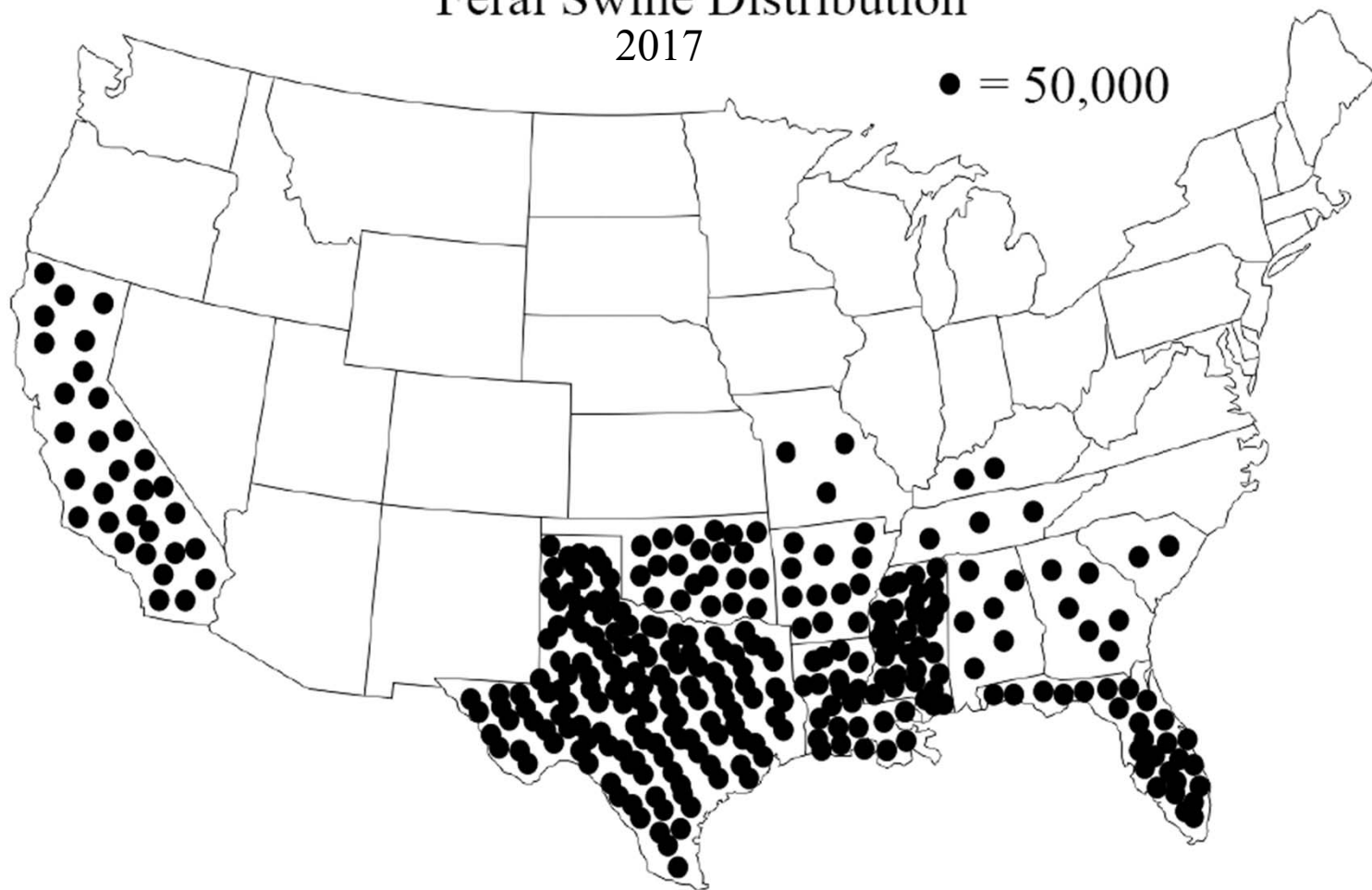






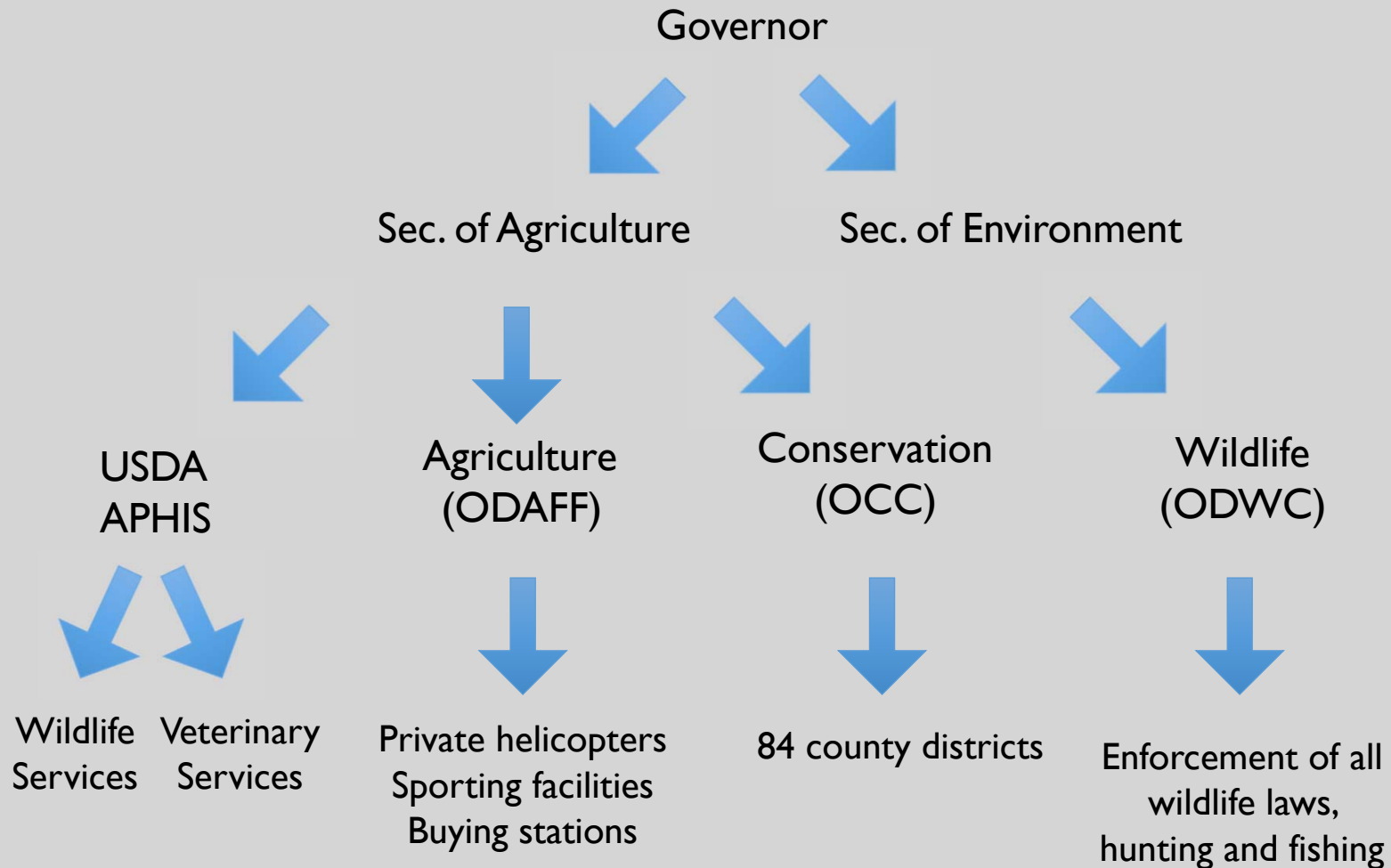
# How many?

Feral Swine Distribution  
2017



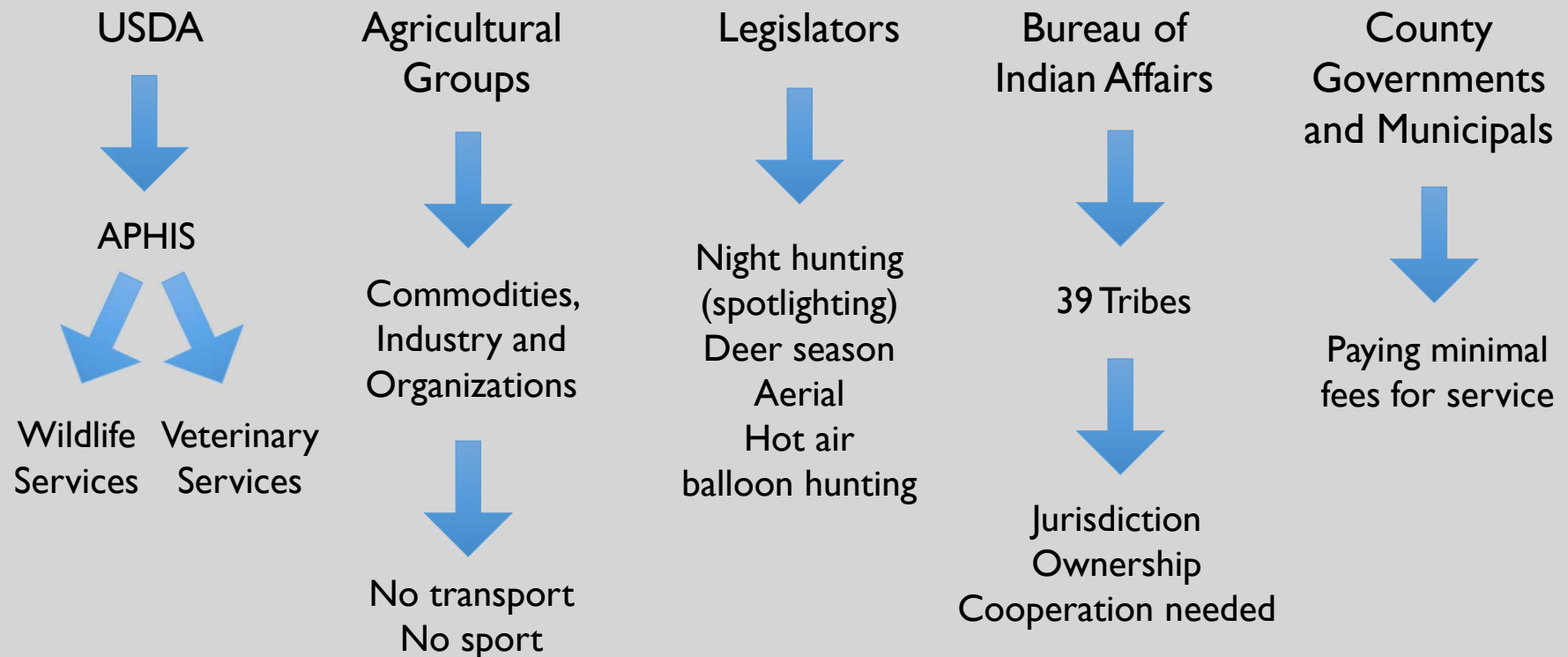


# Constraints: Structure





# Cooperation Required







# Constraints: Hunters

## Fenced hunts

- Fosters the idea that feral hogs/hog hunting is glamorous
- Fosters desire for more hogs

## Hog hunters

- Hog Baying
- No boundaries
- No intention to eliminate





# Oklahoma's initiative

- Public meetings, stakeholder meetings
- Emergency rules adopted August 2015
- Permanent rules adopted March 2016
- SB-326 prohibits import or ownership of exotic swine (warthogs, red river hogs). Potbellies exempted 2017.



# Feral Swine Rule Summary

1. **Purpose and goal.**
  - Eradication (current and new methods) is objective, not preservation.
  - Goal is to render State of Oklahoma free of feral swine.
  - Investigate and implement new population control methods, technologies, and toxicants.
2. **Creates a moratorium on licensing of new feral swine hunting facilities.**
  - Utilize existing feral swine hunting facilities as terminal destinations. No new facilities.
3. **Creates an electronic tracking system for transporters of feral hogs.**
  - Adds a \$25 annual transport license for feral hog transporters.
  - Previous license was free and lasted 5 years.
  - Previously, a phone call and free license were the remedies for those caught illegally transporting.
4. **Creates a free 24 hour transport permit.**
  - A specific permit for each load required to haul feral swine, must identify number and destination.
  - Prior to this, there was no tool for law enforcement to easily identify those illegally transporting swine.
  - Permits accessible via app (click location, number of hogs, destination, receive permit number).
5. **Requires feral swine hunting facilities to keep number records (enter and exit) and report monthly.**
  - This will validate and keep accurate information that was previously estimated.
6. **Creates a Feral Swine Free Zone**
  - Prohibits feral swine facilities in zone, prohibits any transport of feral swine into zone.
  - Requires reporting any sightings of feral swine.
  - USDA will assist eradication.
7. **Adds a \$25 captive hog hunter fee**
  - Feral hog hunt facilities will charge and remit a \$25 captive hunt fee to ODAFF.
  - Used for enforcement purposes and equipment purchases to equip and educate citizens.
8. **Funds raised with the fees in these rules will be used to:**
  - Create the smartphone app and software compatibility to institute the 24 hour transport permit.
  - Purchase hog traps for Oklahoma Conservation Districts to rent or loan to landowners and to train landowners and districts how to trap hogs effectively.
  - Set up a 24 hour hotline for illegal feral swine transportation or release complaints.
  - Investigate illegal transportation of feral swine more effectively.





# Additional Improvements

## **Agreement with ODWC to enforce illegal transportation**

- ODAFF investigator meets with ODWC quarterly
- Agree to share enforcement fines

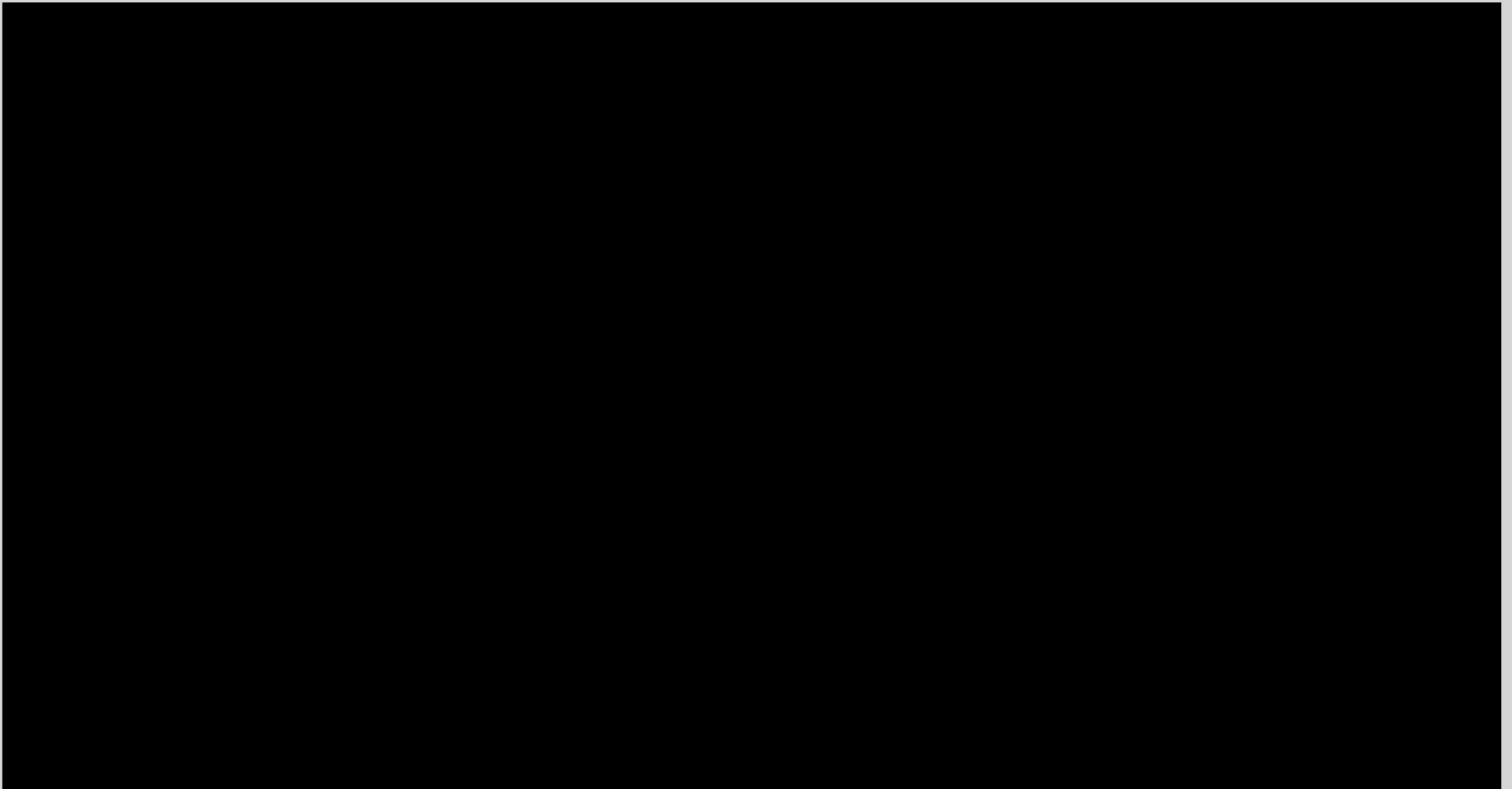
## **Purchased traps and gates for 84 conservation districts**

- Purchased traps and gates from 9 FFA chapters
- USDA/Wildlife Services provided 39 training exercises statewide with conservation districts, counties, tribes, and the public
- Currently upgrading trap gates to live streaming

**Bottom Line: We can't catch them all. We empowered citizens by giving them access to equipment and training to eliminate their own feral swine.**



# Success

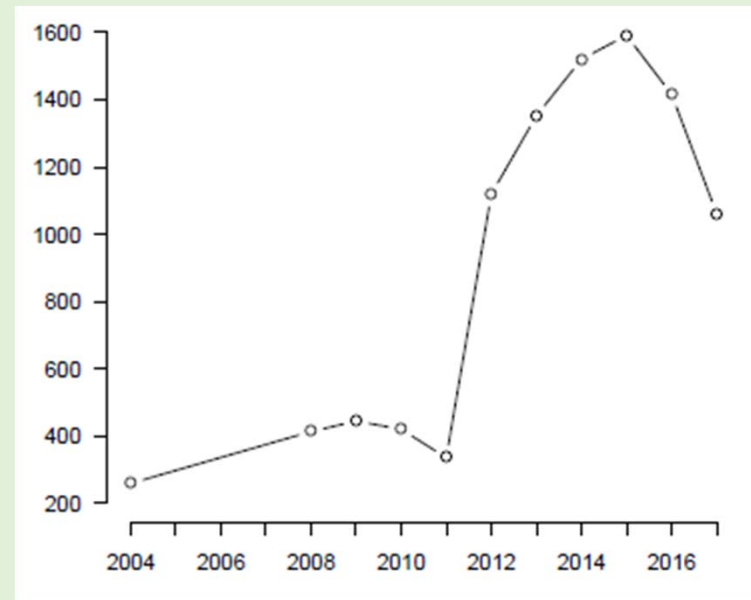




# Success

- 2011: eliminated 2,246
- 2017: eliminated 32,237
- 217% increase annually (see handout)
- Trapping most effective method. ODAFF's initiative to educate and provide traps and resources has allowed for this increase.
- OK had 3<sup>rd</sup> highest feral swine population in 2015, 6<sup>th</sup> highest in 2017.

Number of Feral Swine in Oklahoma (Thousands)



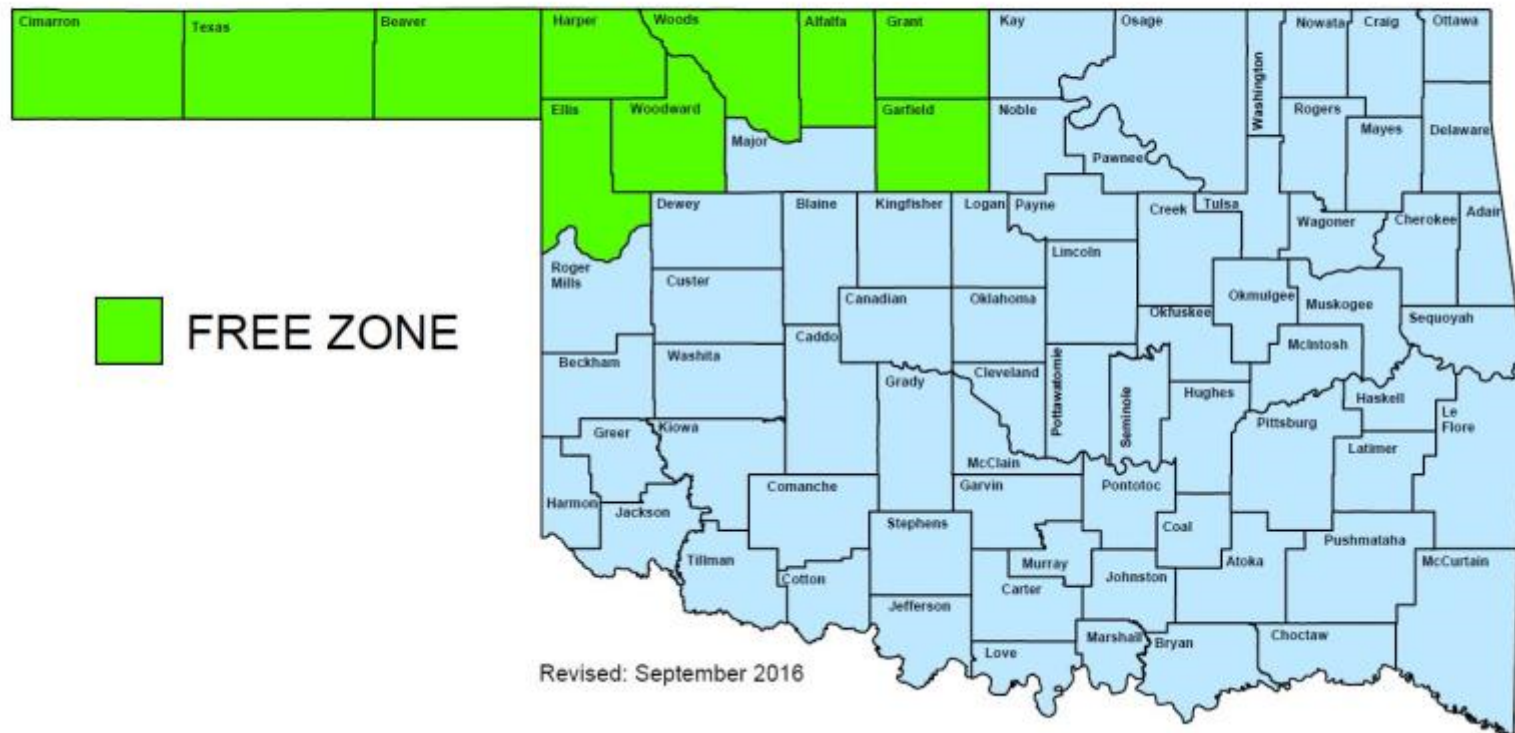
Source: National Wildlife Research Center





# Success

## Oklahoma Feral Swine Free Zone



*Presence of Feral Swine in Oklahoma by County in 2016*



# Conclusion: Impact

- More Oklahomans are seeking assistance and working to eliminate feral swine.
- All related agencies collaborating with the goal of feral hog elimination.
- It is critical to stop the progression of feral swine moving northward.
- We have to continue equipping the public with the most innovative solutions.



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