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# Wild Pigs on USACE Projects: Management Challenges, Research Opportunities and Lessons Learned

June 24, 2020

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US Army Corps  
of Engineers



# Outline

- What's in a name? Wild vs. Feral
- Management Challenges
- Research Opportunities
- USACE Range of Experiences
  - ▶ Ft. Worth District (SWF) – Hunting Opportunities / Landowner Challenges
  - ▶ Tulsa District (SWT) – Impacts / Range of Environmental Conditions
  - ▶ St. Louis District (MVS) – History of Success / Coordination Success
- Q&A Session



# What's in a name?

## Wild vs. Feral X Pig vs. Hog vs. Boar

- ▶ Feral Swine Control Act
- ▶ National Wild Pig Task Force
- ▶ Int'l Symp on Wild Boar & Other Suids
- ▶ Int'l Wild Pig Conference



MO DoC: a feral hog is defined as any hog, including Russian and European wild boar, that is not conspicuously identified by ear tags or other identification and is roaming freely on public or private land without the land manager's or landowner's permission.

OK Statute: "Feral swine" means any hog, pig, or swine species (*Sus scrofa*) including, but not limited to, Russian and European wild boar that are running at large, free roaming, or wild upon public or private lands in this state.

USDAAPHIS: While there is a technical distinction between Eurasian wild boars, feral pigs, and their hybrids, [...]. Thus for the sake of practicality we use the term "wild pigs" to refer collectively to feral pigs, Eurasian wild boars, and hybrids.

# Wild Pig Management Challenges

- “The most abundant free-ranging introduced ungulate in the United States”
- “Wild pigs have mostly deleterious effects on their host environments and are very difficult to control or eradicate”
- “Highly desirable big game animal”

*Mayer and Brisbin Jr. (2008)*



- **Environmental:**

- Wild Pigs responsible for, ANNUALLY!, \$1.5 Billion in damage and control costs.
- Threaten Native Species and Ecosystems
- Threaten Cultural/Historical Resources

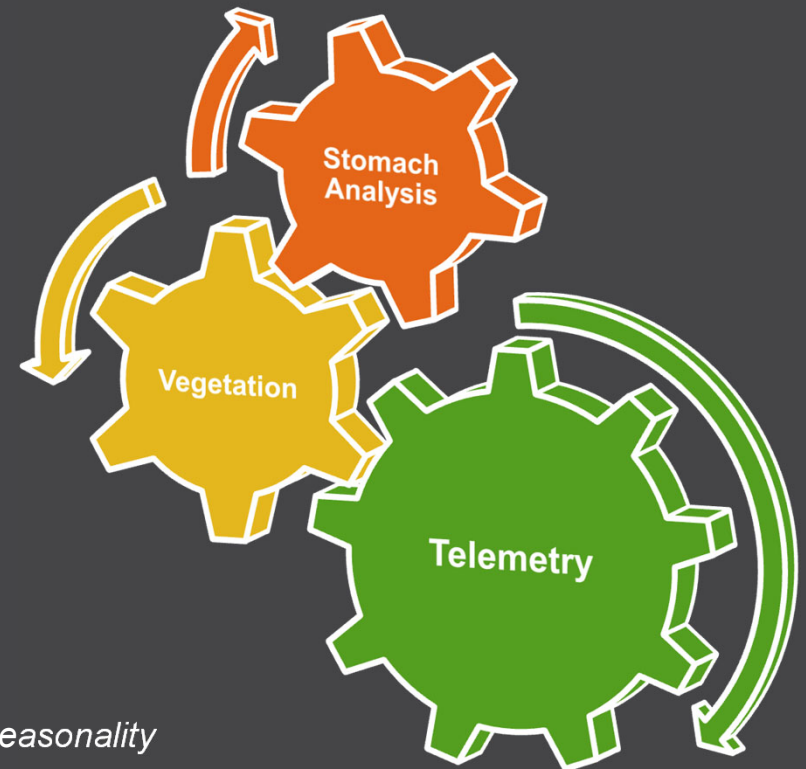
- **Management:**



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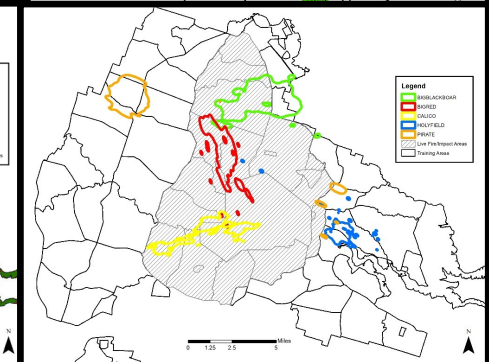
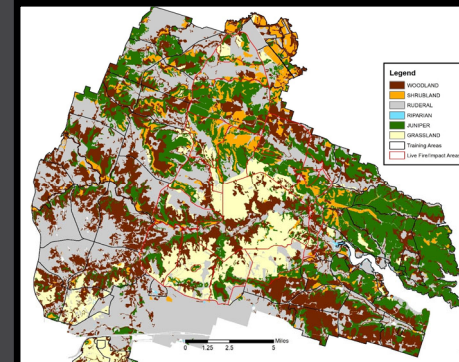
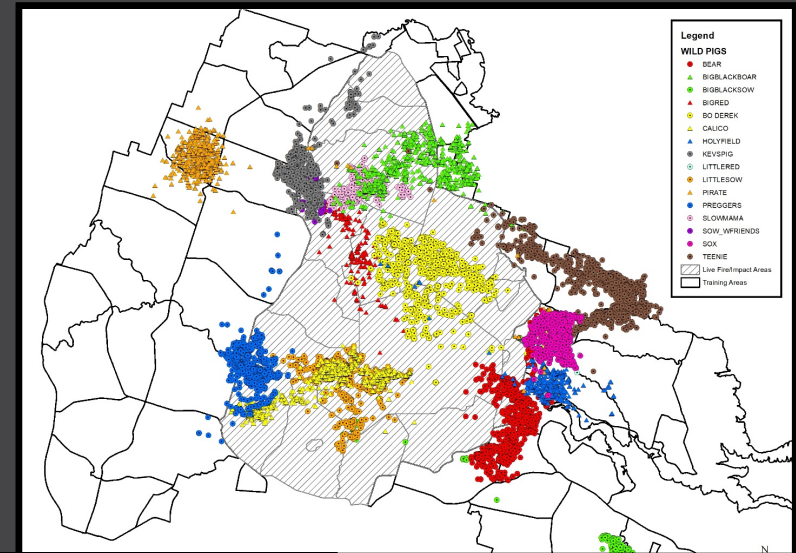
# Research Conducted at Fort Hood, Texas

- **Telemetry**
  - Calculate home ranges for boars and sows
  - Identify core-use areas/habitats (seasonally)
  - Distance moved between consecutive locations
- **Vegetation Surveys**
  - Sampled in “High-Use” Areas
  - Assess Food Availability
  - Density Cover by Habitat
- **Stomach Analysis**
  - Gross Analysis for Baseline Food Preference
  - Seasonal Dynamics
  - Significance of corn/deer feeders
- **Ancillary Research--** *Litter size variability; breeding and farrowing seasonality*



# Impact

- **Management**
  - Seasonal Movements
  - Habitat Selection/Use
  - Seasonal Food Preferences
  - Density (i.e., cover) associated with Selected Habitats
- **Improve Trapping Effectiveness**
- **Assess Impacts to Endangered Species Habitat**



Froehly, J. L., Beane, N. R., Evans, D. E., Cagle, K. E., & Jachowski, D. S. (2020). Using multi-scale behavioral investigations to inform wild pig (*Sus scrofa*) population management. *PloS one*, 15(2), e0228705.



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# Feral Hogs on USACE Projects: Granger Lake

Brandon Randig  
Natural Resource Specialist



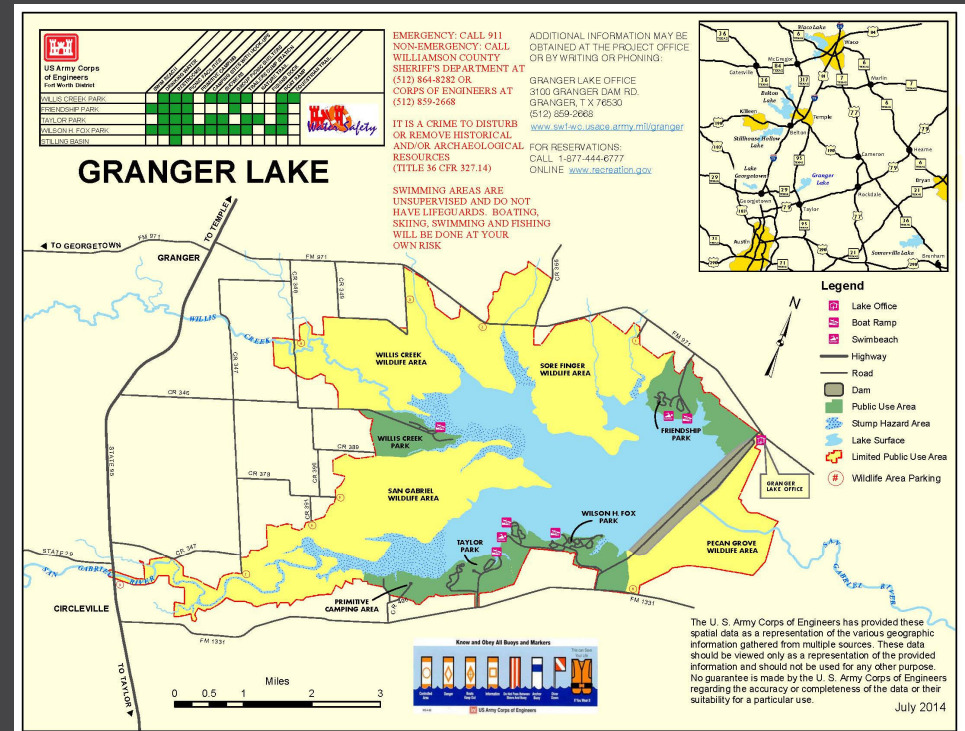
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# Granger Lake – Description

- Project is approximately 10,800 acres
- Located in the Blackland Prairie of Central Texas
  - Primarily grassland prairies
  - Hardwood bottoms
- Surround area is primarily row crop farming
- Primary Missions
  - Flood Damage Reduction
  - Water Supply
  - Recreation
  - Natural Resources
- About 1 Hour From Austin
- Relatively New Lake Project
  - Construction began in October 1972
  - Placed in service Jan 21, 1980





# Granger Lake



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## Granger Lake – Control Methods

- **Archery Hunts**
  - Texas Parks and Wildlife allows year round archery for feral hogs
  - Not efficient method by itself to see any change in population numbers
  - Keeps the hunters happy



## Granger Lake – Control Methods

- **Trapping**
  - **USDA – Aphis**
  - **Texas Parks and Wildlife**
  - **Corps of Engineers has not done trapping at this location**



## Granger Lake – Control Methods

- **Aerial Control**
  - **USDA – Aphis**
  - **Target timeframe is February**
  - **More efficient**
  - **Farmers support it**
  - **Some hunters interference**
  - **Testing samples are gathered**



# Granger Lake – Control Methods



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## Granger Lake – Local Challenges

- Facility/Property Damage
  - Infrastrucure at the project



## Granger Lake – Local Challenges

- Facility/Property Damage
  - Public Accidents/Damage



# Granger Lake – Local Challenges

- **Local Farmers**
  - **Protect their livelihoods**
  - **Want all feral swine eradicated**
  - **View the lake as a sanctuary/breeding facility**
  - **We have a lot of local interaction**





## Granger Lake – Local Challenges

### ■ Hunters

- Feel we should leave the hogs to them to control
- They are very inefficient in control
- Will try to disrupt other methods of controls



## Granger Lake – Local Challenges

- **Non-Hunters/Anti-Hunters**
  - A small group around this area
  - Do not feel anything should be done to control numbers
  - Basically just vocal objections

# Granger Lake – Local Challenges

## ■ Scheduling

- State controlled deer hunts typically last till mid January
- Foliage on trees starts to reappear in Mid March
- USDA's limited resources leads to short suspense windows



# Granger Lake – Local Challenges

- **Endangered Species**
  - **Whooping Cranes**



# Granger Lake – Lessons Learned

- No matter what you do there will always be someone who does not approve
- Public Hunting alone is not efficient enough
- Trapping is too labor intensive
- Aerial methods have been the most efficient.
- Missing a year of control is extremely noticeable



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# Tulsa District Program Overview

Stacy W. Dunkin, M.S. CWB®  
District Biologist- Tulsa District



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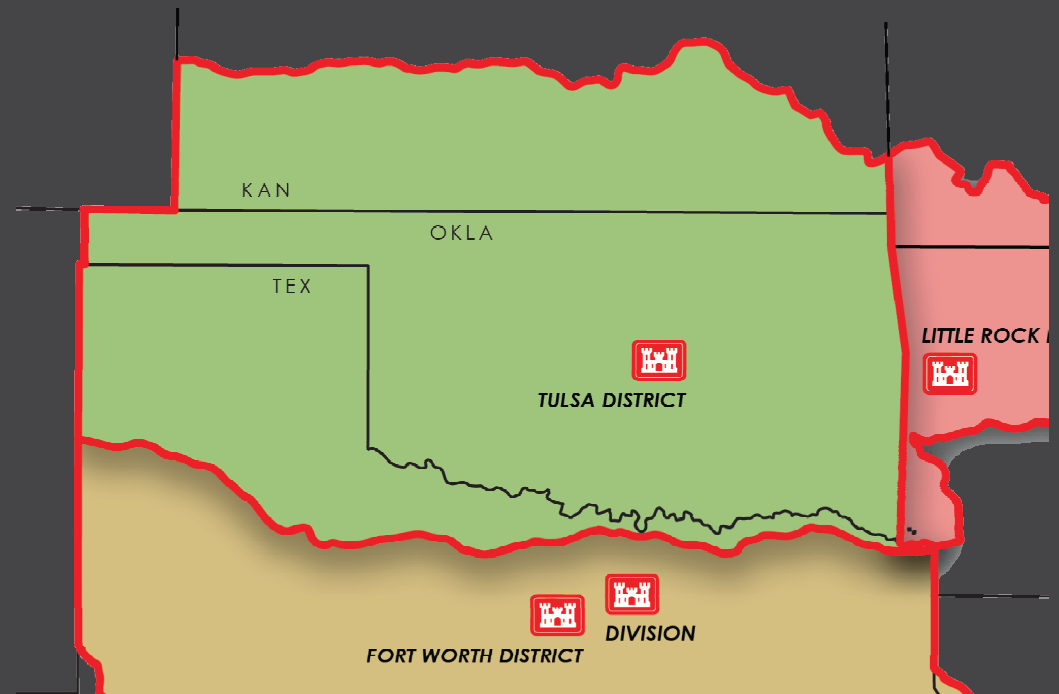
TAMPER GATE  
NOT SHOWN



# Tulsa District Feral Swine Damage Management Program

## ■ Existing Conditions:

- Tulsa District
  - 38 Projects
  - Oklahoma, Kansas, and Texas.
  - 1 Million acres of Land and Water



# Tulsa District Feral Swine Damage Management Program

- Program established in April 2019
  - Infrastructure damage and impacts to endangered species habitat.
  - District Program is modeled after the USDA/APHIS National Feral Swine Damage Management Program.





# Tulsa District Feral Swine Damage Management Program

- Objectives:
  - To stabilize and reduce the range and size of the feral swine population on USACE managed lands to mitigating damages to critical infrastructure, protect special status species habitat, cultural resources, and recreation areas.



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# Tulsa District Feral Swine Damage Management Program

## ■ Program Management:

- Part-time
- Three Biologists
  - Tony Clyde
  - Jason Person
  - Stacy Dunkin
- Assistance from 2 area environmental specialists
  - Chris Gilliland
  - Josh Wingfield



# Tulsa District Feral Swine Damage Management Program

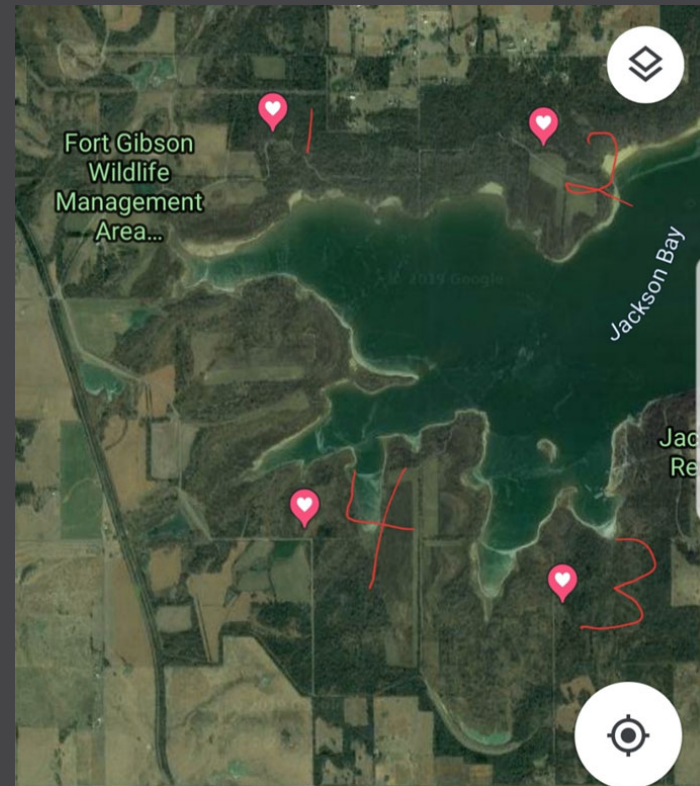
- Game Changer Jr. And Boar BusterTraps
  - Spartan Game Cameras
- MOU with USDA/APHIS
  - Aerial gunning
  - Night Shooting
  - Trapping



# Tulsa District Feral Swine Damage Management Program

## ■ Current Effort:

- 3 Game Changer Jr. Traps, 2 Boar Busters
  - Ft. Gibson Lake
  - Webbers Falls Lake
  - Hugo Lake
  - Pine Creek Lake



# Tulsa District Feral Swine Damage Management Program

- Results (DEC 2019 – JUN 20):
  - 35 Sow
  - 32 Boar
  - 21 sub-adult (unsexed)



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# Tulsa District Feral Swine Damage Management Program

- **Management Challenges:**
  - **No dispatch authority**
  - **State Policies & Regulations**
  - **Public Perception**



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# Tulsa District Feral Swine Damage Management Program

- **Long-term Program Efforts:**
  - **Expand to all 38 Civil Works Projects**
  - **Gain approval for full time effort**
  - **Gain expanded authorities to meet management goals**





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# Feral Hogs on USACE Projects: You Need a Plan

Eric Lemons  
Natural Resources Specialist  
[Eric.G.Lemons@usace.army.mil](mailto:Eric.G.Lemons@usace.army.mil)  
573.222.8562



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TAMPER GATE  
NOT SHOWN





# Day 1 – Choose your battle plan wisely.



# Building a Culture

- Established Populations vs. New Populations
- Using Volunteers
- Hunting vs No Hunting
- Doing Nothing Gains Nothing
- You Can't Do It Alone



# Strength in Numbers

Report. Trap. Eliminate.



Missouri's Cooperative Feral Hog Solution

US Army Corps of Engineers • Engineer Research and Development Center

# Implementing Policy That Assists in Elimination



U.S. ARMY CORPS OF ENGINEERS

## NEWS RELEASE

BUILDING STRONG.™

For Immediate Release:  
August 31, 2017

Contact:  
Amanda Kruse  
314-331-8095  
Amanda.L.Kruse@usace.army.mil

### Corps Reminds Visitors to "Report – Don't Shoot" Feral Hogs

**St. Louis** – The St. Louis District reminds visitors to "Report – Don't Shoot" feral hogs. Hunting of feral livestock on lands owned by the U.S. Army Corps of Engineers, St. Louis District in Missouri is prohibited under Title 36 special restrictions. The St. Louis District has two lake projects in Missouri, Wappapello Lake which currently has established feral hog populations and Mark Twain Lake which does not have feral hog populations at this time.

With fall hunting season's right around the corner cooperation is essential in the Corps' effort to eradicate this extremely damaging pest. Shooting feral hogs interferes with agency trapping activities and further distributes them across the landscape. Hunting feral hogs at Wappapello Lake has been used as a method of eradication for many years. While hunting does reduce small numbers of feral hogs each year, it has been determined that populations remain the same and in some areas are increasing. To be successful in trapping efforts, the Corps' is requesting the cooperation of the public in reporting feral hogs and refraining from shooting feral hogs on Corps' lands.

The Missouri Department of Conservation stated "Feral hogs are highly destructive and prolific pests. Feral hogs will eat nearly anything they come in contact with, including many species of native wildlife. They compete directly with native wildlife by eating acorns, a major fall food source for deer, turkey and black bear. Their rooting and wallowing behaviors destroy Missouri's landscape and pollute our waters. A social group of ten hogs can destroy 20-30 acres overnight, including crops, causing financial burdens on Missouri's landowners and agriculture producers. Damage caused by feral hogs has been estimated at nearly \$1.5 billion per year in the United States."

The St. Louis District is a member of the Missouri Feral Hog Partnership, which is comprised of multiple resource agencies and private land owners. The partnership is led by the Missouri Department of Conservation and the U.S. Department of Agriculture Animal and Plant Health Inspection Service. Its goal is to eradicate feral hogs in Missouri.

Report all feral hog sightings or releases in Missouri by visiting [mdc.mo.gov/feralhog](http://mdc.mo.gov/feralhog) or call 573-522-4115 ext. 3296.

-30-

U.S. ARMY CORPS OF ENGINEERS – WAPPAPELLO LAKE  
10992 Highway T, Wappapello, MO 63966  
<http://www.mvs.usace.army.mil>

REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT, CORPS OF ENGINEERS  
1222 SPRUCE STREET  
ST. LOUIS, MISSOURI 63103-2633

CEMVS-OD-T

26 October 2016

MEMORANDUM THRU CEMVS-OD-T (Ramseyer) *AR*  
CEMVS-OD (Dell'Orco) *DO*  
CEMVS-OC (Levins) *ML*  
CEMVS-DP (Peukert) *DP*  
CEMVS-DX (Zino) *Z*  
CEMVS-DD (Mejia) *ME*

FOR COMMANDER, ST. Louis District

SUBJECT: Policy for the Control of Feral Livestock on St Louis District (USACE-MVS) Managed Lands in Missouri.

1. This enclosure requests approval of a ban on all feral livestock hunting on St Louis District managed lands in Missouri and is submitted for review and approval.
2. In accordance with EP 1165-2-316, United State Code of Federal Regulations, Title 36, Parks, Forest and Public Property, Part 327.11 (d) and (e), approval of this enclosure by the District Commander is requested. Please return enclosure after signing.
5. POC for this effort is Lynn Neher, ext. 8880.

Encls

*Adam Ramseyer*  
Adam Ramseyer  
Chief, Operations  
Technical and Policy Branch

# Backlash



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# Backlash



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# You need a plan

- Be Fluid
- Watershed Approach
- Remove Incentives
- Engage the Public
- Measure Success

## Statewide Strategic Plan for Feral Hog Elimination in Missouri

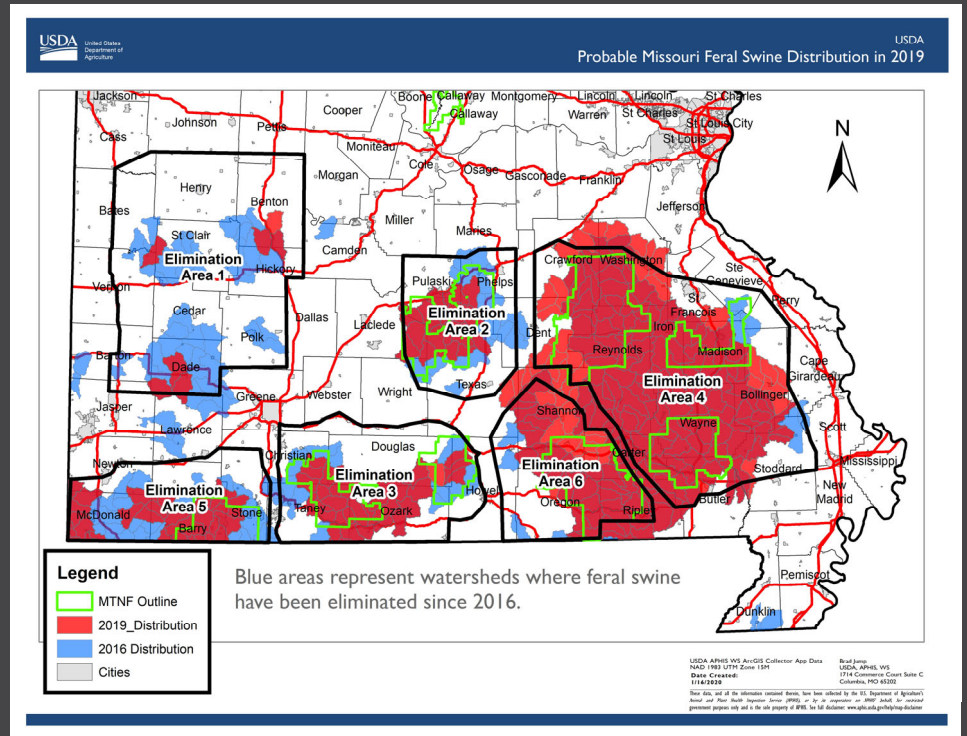
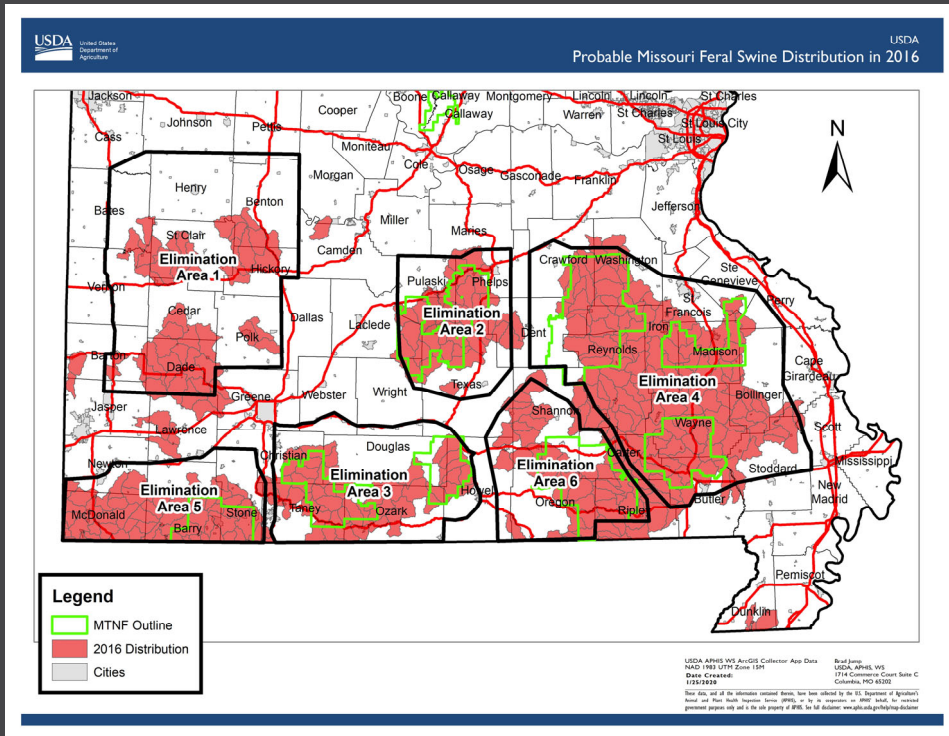


July 2017

Missouri Feral Hog Partnership

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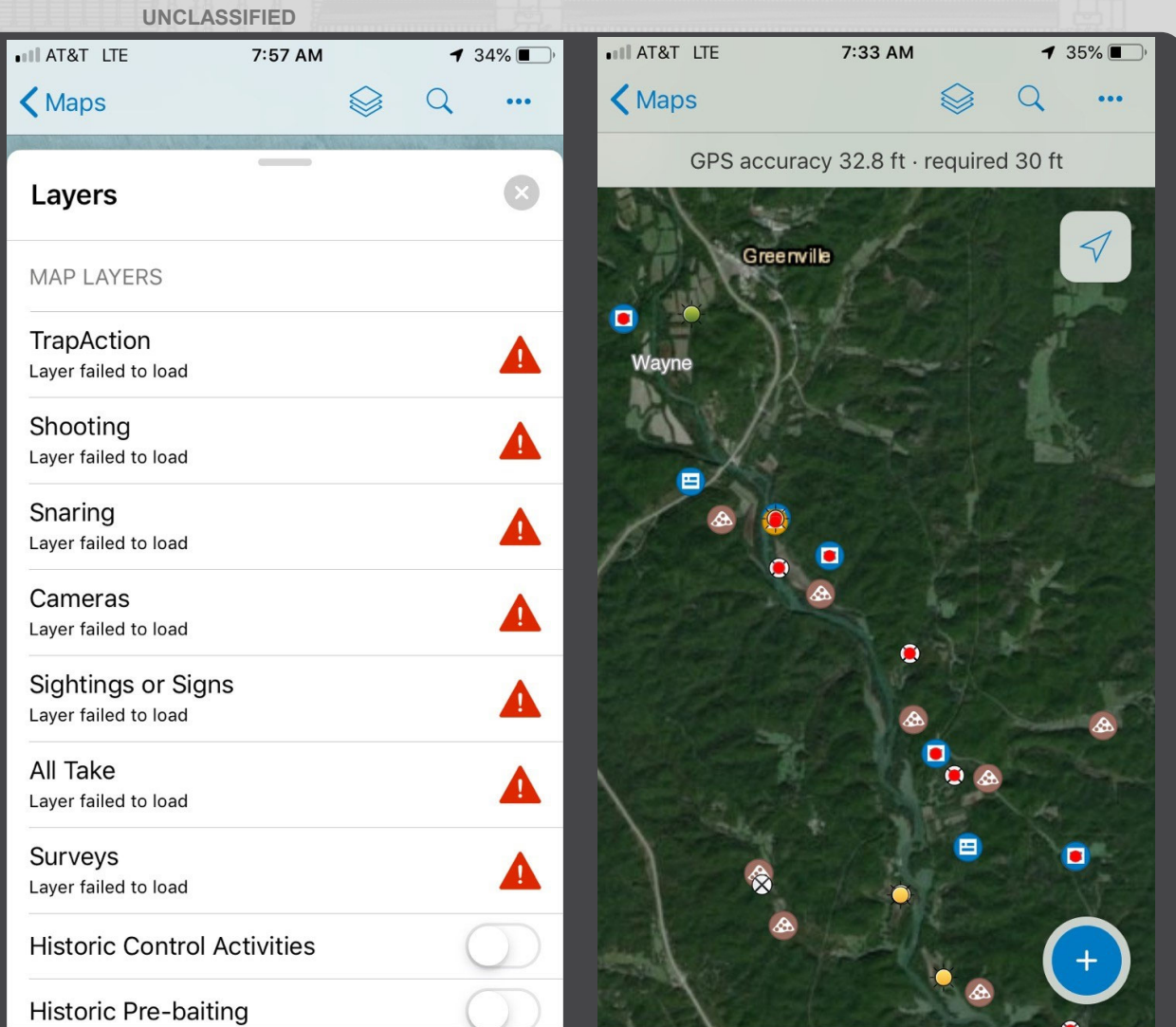
# Strategic Elimination Plan - 2016 vs 2019





# Collector App

- Created by USDA-APHIS
- Multi Agency usage
- Recording Data
- Efficiency



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UNCLASSIFIED

# Communication is Key

- Multi Agency Communication
- Inner Agency Communication
- Public Communication



## FERAL HOG FREQUENTLY ASKED QUESTIONS

Report feral hog sightings and damage to 573-522-4115 ext. 3296 or at [www.mdc.mo.gov/feralhog](http://www.mdc.mo.gov/feralhog).

### WHAT IS A FERAL HOG?

Feral hogs are not wildlife and are an invasive, non-native, destructive species. In Missouri, a feral hog is defined as any hog, including Russian and European wild boar, that is not conspicuously identified by ear tags or other identification and is roaming freely on public or private land without the land manager's or landowner's permission.

### WHY ARE THEY A PROBLEM?

- **Feral hogs destroy habitat and young wildlife.** Their rooting and wallowing cause soil erosion, reduce water quality, and damage agricultural crops and hay fields, as well as destroy sensitive natural areas such as glades, fens and springs.
- **They forage heavily on acorns and compete directly with native species for food.** They commonly eat eggs of ground-nesting birds and almost anything they encounter, including reptiles, amphibians and small mammals. They have been known to kill and eat deer fawns.
- **They spread diseases to people, pets, and livestock.** Feral hogs are known to carry diseases such as swine brucellosis, pseudorabies, trichinosis and leptospirosis. These diseases commonly cause infertility, low milk production, and high mortality in newborn domestic animals. The domestic swine industry is currently free of these diseases, but they are endemic in feral hogs. The reintroduction of these diseases into domestic livestock populations could be devastating to the agriculture industry.
- **Feral hogs cause economic damage.** Found in at least 35 states, the USDA estimates that feral swine cause approximately \$1.5 billion in damages and control costs in the United States each year, with at least \$800 million of this estimate due to direct damage to agriculture.

### WHERE DID FERAL HOGS COME FROM?

Hog hunting for recreation and paid hog hunts gained popularity in the 1990s. This resulted in some individuals illegally releasing feral hogs to establish populations for recreational hunting and selling guided hog hunts. These illegal releases are still occurring, which establishes feral hog populations in new areas and increases the population of hogs in frequently hunted areas. This is evident as the Missouri feral hog population grew from a few counties in the Southeast region to over 30 counties across the southern 1/3 of the state.

GET MORE INFORMATION: [www.mdc.mo.gov/feralhog](http://www.mdc.mo.gov/feralhog)

Feral hog frequently asked questions | Winter 2020

# Day 1 – Choose your battle plan wisely.





Questions?