2023 Annual State Summary Report

Wild Hog Working Group

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SOUTHEASTERN ASSOCIATION OF FISH & WILDLIFE AGENCIES

FOUNDATION FOR A NEW GENERATION

2023 Annual State Summary Report

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Table of Contents

What's new in 2023

There were several changes made throughout the various states participating in the Wild Hog Working Group in 2023. Some of the highest profile changes are outlined below by topic and by state.

Control Efforts:

The 2018 Farm Bill awarded $75 million for the Feral Swine Eradication and Control Pilot Program (2018-2023). Fiscal year 2020 proposed pilot projects were identified in 10 southeastern states by program sponsors (USDA NRCS and WS). This information is posted online (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farmbill/?cid=NRCSEPRD1461219).

Rules, Regulations and Legislation:

- Kentucky- In an effort to stop illegal releases and increase eradication success, Kentucky Department of Fish and Wildlife Resources Commission is considering a prohibition on wild pig sport hunting. The Commission will vote on September 22, 2023. The KY Wild Pig Eradication Task Force has been heavily involved in the Commission process concerning this ban to allow for the protection of Kentucky's wildlife resources.

- Louisiana- LSU's sodium nitrite feral hog bait was patented on August 8, 2023. However, approval of the Experimental Use permit (EUP) is on hold because EPA does not consider the university a state registration agency. Therefore, they require 500K for the EUP to perform testing on the landscape outside of their pen. The EPA can take up to 18 months to approve the EUP on the front end. Additionally, the time for approval of all registrations has been extended from 24 months to 36 months once all peer-reviewed testing is performed.

Executive Summary

The 2023 Annual State Summary Report was prepared by the Wild Hog Working Group (WHWG) as a document compiling wild hog regulatory and management information from the fifteen states that are members of the Southeastern Association of Fish and Wildlife Agencies (SEAFWA). The mission of the WHWG is to further SEAFWA's purpose of promoting the conservation and management of wildlife resources in the face of rapidly expanding wild hog populations that directly endanger those wildlife resources. The purpose of this report is to collect and compare wild hog information from the fifteen member states, and to provide management and policy recommendations to the Directors of SEAFWA.

This report is divided into eight sections (A-H), each concluding with a concise summary and recommendations from the WHWG. Additionally, the report contains The Wildlife Society's Position Statement on Invasive and Feral Species, their Fact Sheet on Feral Swine, and a current wild hog range map produced by the USDA-APHIS-Wildlife Services. Key findings in the report are summarized below.

Section A: General Regulations

- Regulatory authority for wild hogs is complex and variable across states. Authority is often based on whether an animal is captive or free-ranging.
- Allowance for the transport of live wild hogs is common among the states but is considered one of the most important risk factors contributing to the wild hog problem.
- The WHWG recommends prohibiting the transport of wild hogs and has crafted a suggested practices document that can be used as a model for agencies with regulatory oversight of wild hogs.

Section B: Hunting Regulations

- Wild hogs are not generally considered a game species and are given a variety of other classifications.
- Hunting regulations are generally unrestricted on private properties for most states, however Tennessee has adopted an alternative strategy of restricting wild hog hunting in order to reduce the illegal wild hog translocation by hunters.

Section C: Population Status

- Robust wild hog population estimates are not available for most states, however the general distribution within each state is understood.
- The WHWG recommends implementing a standardized monitoring program and will work with agencies to develop a protocol.

Section D: Disease Status

- The WHWG recommends (1) agencies work with wildlife disease specialists to identify any disease monitoring needs, and (2) sharing information about successful zoonotic disease education.

Section E: Damage

- The few available monetary estimates of hog damage highlight the incredible negative economic impact of wild hogs. Additionally, there are tremendous costs to wildlife and natural resources that are not accounted for in many damage estimates.
- The WHWG recommends (1) agencies examine methods of obtaining monetary damage estimates, and (2) agencies document impacts to natural resources for use in educational programs.

Section F: Control Efforts

- The goals for managing wild hog populations vary greatly across states. Some states specify "eradication", while others seek to perpetuate hogs with the "European genetic strain" to provide opportunity for hunters.
- The WHWG recommends that states adopt a management goal of wild hog eradication in feasible locations.
- States with isolated wild hog populations should implement aggressive control efforts, live transport prohibitions, and consider prohibiting hunting to rapidly arrest population growth and expansion.
- Monetary expenditures vary greatly across states, and some agencies with intensive control programs face substantial financial commitments that may not be sustainable in the future.
- The WHWG recommends that state game and fish agencies obtain or provide funds for research into economical, efficacious control methods and investigation of the cultural and social dynamics of wild hog hunting

Section G: Educational Efforts

- The WHWG recommends that state game and fish agencies work collaboratively with multiple state and federal partners to disseminate accurate and consistent information on wild hog issues.

Section H: Emerging Issues, Research and General Comments

- The WHWG recommends that state game and fish agencies promote and encourage research for economical, efficacious control methods and related public perceptions including the cultural and social dynamics of wild hog hunting.
- The WHWG will investigate potential sources of funds for use in research projects that address management priorities. This includes the proposal for a SEAFWA-funded project to develop and implement a state-independent program for testing and certification of wild hog toxicant feeders as bear-proof.

Wild Hog Working Group Background, Mission and Objectives

Background

In 2011, the Directors of the Southeastern Association of Fish and Wildlife Agencies (SEAFWA) took action in the face of rapidly expanding wild hog populations which directly endanger wildlife resources and formed the Wild Hog Working Group (WHWG). The WHWG is composed of biologists and wildlife disease experts from those game and fish agencies who are members of SEAFWA. Many state agencies have formed task forces or working groups within their respective states, however the WHWG will provide an opportunity for state agencies to work collectively to face the growing wild hog populations across the Southeastern U.S.

Mission

The Wild Hog Working Group was established to further SEAFWA's purpose of promoting the conservation and management of wildlife resources by: Developing effective, science-based management recommendations for stakeholders, implementing recommendations, and advising the SEAFWA Directors on issues relating to wild hog policy and administration, funding opportunities, research and management opportunities. Additionally, the WHWG will provide opportunity for its members to collaborate and exchange information on matters relating to wild hog management within the Southeastern U.S.

Objectives

1) Encourage uniform policies that prohibit the interstate movement of wild hogs and translocation of wild hogs.

2) Promote and encourage research for economical, efficacious control methods and related public perceptions including the cultural and social dynamics of wild hog hunting.

3) Develop management plans for wild hog population eradication or reduction based on sound scientific and ground-proven methods.

4) Discuss the role of federal entities in the control of wild hogs in the southeast region.

5) Encourage partnerships between states and between state and federal entities to unify the battle against the spread of wild hogs.

6) Inform the SEAFWA Directors of the actions of the WHWG and act on any directives given to the WHWG by the Directors.

Section A: General Regulations

1. What state agency has regulatory authority for hogs?

Alabama – The Alabama Department of Conservation and Natural Resources (ADCNR) has regulatory authority for feral hogs to include hunting/trapping and nuisance control.

Arkansas – The Arkansas Livestock and Poultry Commission (a division of Arkansas Department of Agriculture) has authority over possession and related issues involving live feral hogs. Public agencies and individual landowners have control over hunting and trapping of feral hogs on the property they control.

Florida – The Florida Department of Agriculture and Consumer Services (FDACS) and the Florida Fish and Wildlife Conservation Commission (FWC) share authority: the FDACS regulates the transportation and holding of live "feral swine" and the FWC regulates the take (hunting) of wild hogs.

Georgia – The Georgia Department of Natural Resources and the Georgia Department of Agriculture.

Kentucky – The Kentucky Department of Fish & Wildlife Resources (KDFWR) regulates wild pigs (no formal definition but understood as any pig outside of a fence where ownership is not identifiable). Kentucky Department of Agriculture (KDA) regulates domestic pigs.

Louisiana – The Louisiana Department of Wildlife and Fisheries (LDWF) has authority over feral hogs. Louisiana Department of Agriculture and Forestry (LDAF) has authority over interstate transport of feral hogs. Recently, LDAF started the Control the Feral Pork Program (CFPP) which permits individuals to move feral hogs at no charge to the individual. Additionally, they permit feral hog pens for the sum of $250.

Mississippi – The Mississippi Department of Wildlife, Fisheries & Parks.

Missouri – Primary statutory authority for feral hogs lies with the Missouri Department of Agriculture (MDA). The Missouri Department of Conservation (MDC) sets some permit requirements during firearms deer and turkey seasons.

North Carolina – The North Carolina Wildlife Resources Commission regulates feral swine, defined in law as any free-ranging member of the species *Sus Scrofa*. The NC Department of Agriculture regulates captive pigs and their transport/importation.

Oklahoma – The Oklahoma Department of Agriculture, Food and Forestry (ODA) regulates everything except hunting and trapping of free-roaming feral hogs. The Oklahoma Department of Wildlife Conservation regulates hunting and trapping of free-roaming feral hogs.

South Carolina – The South Carolina Department of Natural Resources and Clemson Livestock/Poultry Health have authority.

Tennessee –The Tennessee Wildlife Resources Agency (TWRA) has authority over wild hogs. The Tennessee Department of Agriculture has authority over sporting swine within privately owned preserves (can't be feral or wild).

Texas – The Texas Animal Health Commission (TAHC) regulates transport, holding facilities (i.e. buyers), authorized hunting preserves, slaughter facilities and disease. The Texas Parks and Wildlife Department (TPWD) regulates pig hunting and issues permits for authorized hunting preserves with regard to leases and aerial management (landowner authorizations).

Virginia – The Virginia Department of Game and Inland Fisheries (DGIF) has jurisdiction over feral hogs as they are listed as a nuisance species.

West Virginia – The West Virginia Division of Natural Resources (WVDNR) for hunting; The West Virginia Department of Agriculture (WVDOA) for transporting in and out of state. West Virginia has two categories for "hogs." Wild boar, which were established in the 1970s by stocking Eurasian boar in southwest West Virginia, are managed by the WVDNR as a game animal in four counties; all other swine, feral or domestic, are regulated by the WVDOA.

2. What state agency enforces regulations?

Alabama – The Alabama Department of Conservation and Natural Resources.

Arkansas – The Arkansas Livestock and Poultry Commission has authority to enforce its own regulations regarding feral hog possession. Any certified law enforcement officer may issue a citation under A.C.A. 2-38-504, which prohibits individuals, not licensed by the Arkansas Livestock and Poultry Commission, from purchasing, offering for sale, receipt, possession, importation, distribution, or transportation of a live feral hog.

Florida – The FDACS and FWC.

Georgia – The Georgia Department of Natural Resources and the Georgia Department of Agriculture.

Kentucky – The KDFWR.

Louisiana – The LDWF enforces regulations on feral hog hunting. All state law enforcement can enforce transport regulations.

Mississippi – The Mississippi Department of Wildlife Fisheries & Parks.

Missouri – The MDC has been given statutory authority to enforce certain MDA rules surrounding feral hogs.

North Carolina – The North Carolina Wildlife Resources Commission enforces regulations related to take (hunting/shooting, trapping) of free-ranging pigs (aka feral swine). The NC Department of Agriculture enforces regulations related to captive pigs.

Oklahoma – The ODA enforces everything except hunting and trapping of free-roaming feral hogs. The Oklahoma Department of Wildlife Conservation enforces hunting and trapping of hogs that are not in an enclosure.

South Carolina – Both the SCDNR and Clemson Livestock/Poultry Health enforce regulations, depending upon the circumstances and what's being done to or with the hogs.

Tennessee – The TWRA enforces regulations related to wild or feral hogs. The Tennessee Department of Agriculture regulates the importation of sporting swine into privately owned preserves.

Texas – The TAHC enforces regulations related to transport, release, slaughter and hunting preserves; TPWD enforces regulations related to hunting preserves.

Virginia – The VADCS (Virginia Department of Agriculture and Consumer Services) and DGIF both have regulations pertaining to hogs, so both agencies enforce the respective regulations.

West Virginia – The WVDNR regulates the possession and hunting of wild boar within a four-county management area and WVDOA regulates the importation of feral or domestic swine.

3. May live hogs legally be relocated to another property?

Alabama – Live feral hogs, once trapped or caught, must be killed at site of capture.

Arkansas – No, feral hogs captured on private property may be held on the same property where they were captured but under no circumstances may feral hogs be transported or relocated to another property alive.

Florida – Yes, but relocation is allowed only by a licensed feral swine dealer to locations where there will be no direct contact with domestic swine herds (only to slaughter, licensed game reserve or an approved feral swine holding facility).

Georgia – Yes, provided they are being transported under a valid transport permit and being taken to a licensed facility. Licensed facilities are slaughterhouses, fenced baying pens, and fenced shooting preserves. The transport must either tag pigs with official ID prior to transport or notify DNR before and after transport via smart phone app.

Kentucky – No. (See KRS 150.186: Release of hog or pig into the wild prohibited; importing, possessing or transporting wild or feral pig or boar prohibited; accidental escape of livestock exempted.) 1. No person shall release a hog or pig from the family Suidae into the wild. 2. No person shall import, possess or transport in Kentucky any wild or feral pig, Eurasian or Russian boar, or any hybrid of these, whether born in the wild or captivity. 3. This section shall not apply to the accidental escape of animals of the porcine species raised as livestock as defined in KRS 246.010.

Louisiana – They may be legally transported with a permit from LDAF to: 1) An LDAF-permitted holding pen, 2) a quarantine feedlot, 3) a USDA- or state-permitted slaughter facility. They may not be released into the wild.

Mississippi – No. Except by special permit only, may only be released into an enclosure, 500 square feet or less for the purpose of slaughter.

Missouri – Live feral/wild-caught hogs may only be transported from farm to farm or farm to slaughter-only markets. Live feral/wild-caught hogs may not be possessed or transported on or through public land.

North Carolina – Captive pigs with approved documentation from the North Carolina Department of Agriculture may be transported live to another property and maintained in captivity. Pigs that do not have appropriate documentation are presumed to be feral and their transport is illegal, nor can they be released alive from any trap.

Oklahoma – Licensed transporters, with a 24-hour permit, may transport live hogs to licensed facilities (enclosures) or to slaughterhouses. No transport is allowed into or through a "hog free zone" as defined by the ODA.

South Carolina – Live swine may only be transported on public roads and waterways with an official form of identification approved by the state veterinarian. Hogs ~~removed~~ from the wild may not be transported alive.

Tennessee – Only sporting swine (disease-tested and marked) on permitted preserves may be relocated. Live possession of hogs originating from the wild is prohibited.

Texas – Males may be released into a hunting preserve which is regulated in two ways: The facility must have a hunting-lease permit from TPWD, and it must be swine proof as determined by TAHC.

Virginia – According to regulation 4VAC 15-30-40, you cannot import, possess, liberate or sell a wild pig without a permit from DGIF.

West Virginia – Within a four-county management area wild boar may not be taken by hunters except by lethal methods; therefore, it is illegal to possess live wild boar. Transport and possession of feral swine is prohibited. Domesticated swine may be relocated. However, this excludes transport and relocation to establish a feral swine population. (See WV CSR 61-1-5).

4. May hogs be released into the wild or just into enclosures?

Alabama – Upon capture or possession, feral hogs are to be killed on site, and may not be released upon same property or transported live to another. No domestic hogs may be released into the wild.

Arkansas – Feral hogs may not be released into the wild, public or private, under any circumstances.

Florida – Only to a licensed game reserve or an FDACS-approved feral swine holding facility.

Georgia – Only in enclosures.

Kentucky – Neither (see KRS 150.186).

Louisiana – They may be released legally into LDAF-permitted pens, quarantine feedlots, or USDA- or state-permitted slaughter facilities. They may not be released legally into the wild.

Mississippi – By special permit only into an enclosure 500 square feet or less for slaughter purposes.

Missouri – Any person who recklessly or knowingly releases any swine to live in a wild or feral state upon any public land or private land not completely enclosed by a fence capable of containing such animals is guilty of a class A misdemeanor and may be sentenced to pay a fine up to two thousand dollars. Each swine released shall be a separate offense. Every person who has previously been found guilty of violating the provisions of this section, committed on separate occasion where such offense occurred within ten years of the date of the occurrence of the present offense and who subsequently is found guilty of violating this section shall be guilty of a class E felony. Each swine so released shall be a separate offense.

North Carolina – Pigs may under no circumstances be released for hunting or trapping purposes. Feral swine may not be released alive from any trap.

Oklahoma – A “Judas pig” system is allowed if utilized for control methods. Hogs may be released by licensed transporters, with a 24-hour permit, into licensed enclosures or slaughter facilities. No transport is allowed into or through a "hog free zone" as defined by the ODA.

South Carolina – Hogs may not be introduced to the wild. Live hogs may not be removed from the wild so any hog transported to and released into an enclosure must have an official form of identification approved by the state veterinarian.

Tennessee – Sporting swine (disease -tested and marked) having never been wild may be released within permitted preserve enclosures.

Texas – No free-range release is permitted. (Note: Hunting preserves can be very large.).

Virginia – Per regulation, they cannot be possessed or released without a permit (4VAC 15-30-40).

West Virginia – No free-range release is allowed (See WV CSR 61-1-5).

5. Is live transport allowed for any reason?

Alabama – Live transport is prohibited.

Arkansas – No

Florida – Yes, but live transport is allowed only by a licensed feral swine dealer to locations where there will be no direct contact with domestic swine herds (only to slaughter, licensed game reserve or an approved feral swine holding facility). On FWC-managed public lands, wild hogs may not be transported alive.

Georgia – Yes, see above.

Kentucky – No (see KRS 150.186).

Louisiana – Yes, live transport is allowed with permit from LDAF.

Mississippi – Yes. By special permit only, may only be released into an enclosure, 500 square feet or less for the purpose for slaughter.

Missouri – Any person possessing or transporting live feral swine on or through public land is guilty of a class A misdemeanor. Every person who has previously been found guilty of violating the provisions of this section, committed on a separate occasion where such offense occurred within ten years of the date of the occurrence of the present offense and who subsequently is found guilty of violating this section shall be guilty of a class E felony.

North Carolina – Only pigs with approved documentation from the NC Department of Agriculture may be transported live; if they do not have appropriate documentation, they are presumed to be feral and their transport is illegal.

Oklahoma – Licensed transporters, with a 24-hour permit, may transport hogs to licensed enclosures or slaughter facilities. No transport is allowed into or through a "hog free zone" as defined by the ODA.

South Carolina – Transport of wild swine from the wild is prohibited.

Tennessee – No, live transport of feral hogs is not allowed for any reason.

Texas – Yes, to slaughter direct, or to slaughter through licensed holding facility.

Virginia – Feral hogs may only be possessed with permit from DGIF (4VAC 15-30-40); additionally, any pigs successfully trapped must not be removed from the trap site alive.

West Virginia – Yes, domesticated swine, but no for feral swine or wild boar. (See WV CSR 61-1-5).

6. Is interstate importation of feral hogs allowed and, if so, what entry requirements must be met?

Alabama – No interstate transportation is allowed for wild hogs.

Arkansas – No, state law prohibits the possession of feral hogs which nullifies all entry and inspection requirements.

Florida – Yes (1) swine must be accompanied by an Official Certificate of Veterinary Inspection (OCVI) that shows FDACS brucellosis and pseudorabies testing requirements have been met or (2) swine exempted from the OCVI requirement – swine consigned directly to a recognized slaughtering establishment or an approved

livestock market for sale to slaughter – must be accompanied by an Owner-Shipper Statement. All swine imported into Florida must be accompanied by a Prior Permission Number (provided by the FDACS following completion of the above regulatory requirements).

Georgia – Yes: Must follow all transport permitting and conditions an (1) Feral Swine that have been fed garbage may not enter Georgia under any conditions. (2) Feral swine entering Georgia must be accompanied by an official Certificate of Veterinary Inspection identifying each animal with a USDA approved metal ear tag.

Required test results, test dates, and prior permit number must be recorded on the Certificate of Veterinary Inspection. Such animals shall not have been exposed to any contagious or infectious disease prior to or during shipment. (3) Feral swine entering Georgia must meet the following requirements: (a) Originate from a validated brucellosis free herd and a qualified pseudorabies free herd with the dates of the last tests and the validated and qualified herd numbers recorded on the Certificate of Veterinary Inspection, or; (b) Be permitted on a Form VS 1-27 to a state or federally approved slaughter establishment, or; (c) They are permitted on a Form VS 1-27 to an approved hunting preserve. (4) Feral swine entering Georgia must be isolated for a period of at least thirty (30) days following entry. A quarantine may be issued, and the swine must test negative for pseudorabies and brucellosis between thirty (30) and sixty (60) days of entry in order to release the quarantine.

Kentucky – No, see KRS 150.186.

Louisiana – Yes, importation is allowed. LDAF regulations apply and require a negative swine brucellosis and pseudorabies test, as well as a Certificate of Veterinary Inspection issued within 30 days of movement. Also, they can enter in a sealed truck under a VS-127 transport form if going directly to slaughter.

Mississippi – No.

Missouri – All feral swine (including Eurasian and Russian swine) entering Missouri must: 1. Obtain an entry permit; 2. Be officially identified; 3. Be listed individually on a Certificate of Veterinary Inspection, in addition to age, gender and permit number of feral swine facility of destination; 4. Must be from a validated and qualified herd. Last test date and herd numbers must be listed on the Certificate of Veterinary Inspection; or, 5. Have two negative tests 60 days apart for brucellosis and pseudorabies within 30 to 60 days prior to movement. The laboratory and test date must be listed on the Certificate of Veterinary Inspection. 6. Feral swine moving directly from the farm-of-origin to an approved processing facility or to an approved slaughter-only facility will be exempt from any required testing.

North Carolina – No. It is illegal to import feral swine into North Carolina.

Oklahoma – Licensed transporters, with a 24-hour permit, may transport hogs directly to slaughter in a sealed trailer and must be accompanied by a written consent order to enter the state, signed by the State Veterinarian. All imported hogs must be cleared under USDA form 1-27.

South Carolina – Federal and state regulations apply; they must have Certificate of Veterinary Inspection and they cannot be released into the wild.

Tennessee – No, interstate importation of feral hogs is not allowed.

Texas – No.

Virginia – All pigs must have a certificate of veterinary inspection signed by a licensed veterinarian to be imported into Virginia from out of state per VDACS regulations. Transporters must also possess a permit from DGIF to import or possess a predatory or undesirable species (4VAC 15-30-20 and 4VAC 15-30-40).

West Virginia –No

7. May feral hogs be sold in public sale barns?

Alabama – No.

Arkansas – No.

Florida – No.

Georgia – Yes, but only for slaughter.

Kentucky – No.

Louisiana – Yes, but only if the sale barn has an official quarantine feedlot which none do so currently there are no feral hogs sold in sale barns in LA.

Mississippi – Yes, but the Mississippi Board of Animal Health requires feral swine to be quarantined for slaughter and not allowed to leave premises alive.

Missouri – Yes, if they meet the above criteria.

North Carolina – No.

Oklahoma – No.

South Carolina – No.

Tennessee – No, feral hogs cannot be sold in public sale barns.

Texas – Not unless the sale barn is a licensed holding facility. Furthermore, transport is only permitted when hogs are being released into approved facilities (i.e. Hunting Lease, Holding Facility, Slaughter Facility).

Virginia – Pigs in general can be bought or sold at public sale auctions without paperwork if they originated within the Commonwealth. If they are brought in from out of state, they must have a certificate of health from a licensed veterinarian. However, according to regulation, they cannot be possessed or sold without permit from DGIF (4VAC 15-30-40).

West Virginia – No, according to state veterinarian.

8. May feral hogs be sold for slaughter?

Alabama – No.

Arkansas – No

Florida – Yes, to approved slaughter facility by licensed feral swine dealer.

Georgia – Yes, see above.

Kentucky – No.

Louisiana – Yes.

Mississippi - No.

Missouri – Yes, as described in No. 7 above.

North Carolina – No.

Oklahoma – Yes.

South Carolina – No.

Tennessee – No, feral hogs may not be sold for slaughter.

Texas – Yes. Transport is only permitted for dead hogs or those live hogs being transported to approved facilities (i.e. Hunting Lease, Holding Facility, and Slaughter Facility).

Virginia – They must have a permit to sell a predatory or undesirable species (4VAC 15-30-40).

West Virginia – No, according to state veterinarian.

Section Summary and Recommendations

Based on the responses from the WHWG member states, it is clear that the regulatory authority for critical wild hog issues such as movement, release, and enforcement is complex and highly variable among states. Authority is often shared with state agriculture departments and is often based on whether an animal is captive or free-ranging. Alternatively, authority may depend on interpreting arcane definitions of an animal as "feral swine", "sporting-swine", or "wild boar". Furthermore, some state agriculture departments have enforcement authority, but lack any enforcement personnel. Of most concern is the common position of allowing the transport of live wild hogs. Members of the WHWG have identified translocation of wild hogs into new areas as one of the most important factors contributing to the wild pig problem. Slaughter facilities and hunting enclosures are the common destinations for live wild hog transport. However, ensuring that all shipments of live wild hogs arrive at a legally allowable destination is problematic.

The WHWG recommends that state game and fish agencies work together to develop a standardized approach that prohibits the transport of live wild hogs. The WHWG has crafted a draft toolkit for reducing the spread of wild hogs.

Section B: Hunting Regulations

1. Are feral hogs considered game animals? If not, what is their classification?

Alabama – Feral hogs hold dual classification as game animals and furbearers any time they are trapped. Feral hogs can be hunted under purchase of a resident or nonresident all game or small game license.

Arkansas – The AGFC does not consider feral hogs to be game animals. It does not regulate feral swine since they are not currently considered wildlife by the AGFC. A feral hog is deemed to be a public nuisance.

Florida – Feral hogs are considered wildlife but are not protected – they may be taken/hunted day or night, year-round on private properties (no licenses or permits required).

Georgia – No, they really fall into their own category. They are not classified with wildlife, game animals, non-game animals, or unprotected species.

Kentucky – The KDFWR does not recognize or manage wild pigs as game animals. Wild pigs are designated as environmentally injurious prohibited wildlife. Per regulation 301 KAR 2:082, a person shall not import, possess, or transport through KY a member of the family Suidae (pigs or hogs), except for domestic swine. While wild pigs may be taken year- round, hunting is discouraged. Possession of a hunting license is required unless license-exempt (landowner, spouse and tenants hunting on their own land).

Louisiana – No, they are considered "outlaw quadrupeds."

Mississippi – No, they're considered "nuisance" animals.

Missouri – Feral hogs are not considered game animals. Feral hogs are considered an exotic, invasive species. MDC does not regulate feral swine since they are not wildlife.

North Carolina – No, they are classified as a non-game wild animal.

Oklahoma – No, feral animals.

South Carolina – They are not classified as game, but ~~we~~ do require that persons hunting them be licensed, and the harvest is controlled on state WMA lands. On private land and with a license, a person can hunt year-round during daylight hours. There are special provisions for night hunting.

Tennessee – In 2010, the management strategy and viewpoint held by the TWRA towards wild hogs changed. Instead of being viewed as prized big game trophy animals, wild hogs were reclassified as invasive exotics. The official designation of wild swine in Tennessee is "species deemed destructive".

Texas – No, they're considered an exotic animal.

Virginia – No. They are classified as a nuisance species in the Code of Virginia (29.1-100).

West Virginia – No, but Eurasian wild boar within the four-county management area are considered game animals and have an established hunting season.

2. What methods of harvest are allowed?

Alabama – Methods of take on private lands include hunting by any type weapon, trapping, hunting at night during specified times, and hunting with dogs. Wildlife damage permits issued by the ADCNR allow the use of aircraft, night-vision equipment, and hunting with bait.

Arkansas – On private land, all methods are allowed with landowner permission, including dog hunting, trapping and snaring. On public land, effective July 1, 2016, the take of feral hogs is prohibited on all AGFC owned property and all NWRs. USACE, USFS and other cooperatively managed WMAs allow the opportunistic take of feral hogs during any open (or permitted) firearms (including muzzleloader) bear, deer or elk season with methods legal for that season or zone. On other public property not included in the WMA system and not described above, feral hogs may be taken, incidental to the legal pursuit of other wildlife, during any open daytime season using the weapons legal for that season.

Florida – On private lands (with landowner permission): Feral hogs may be taken year-round by any legal means (including archery, legal firearms, dogs, traps, etc.); a gun and light at night permit is not required. On public hunting lands: All methods legal for taking game (archery, legal firearms and dogs) are allowed as per

area-specific regulations; feral hogs may not be transported alive.

Georgia – On private land they can be hunted (bait legal) or trapped at any time. They can be taken with any legal deer, bear, turkey, or small game firearms and archery equipment. Snaring and poisoning are not legal.

Kentucky – Wild pigs may be taken by muzzle-loading or modern rifles or handguns of any caliber, muzzle-loading or breech-loading shotguns no larger than 10-gauge, and archery or crossbow equipment. Wild pigs may also be trapped, but they must be killed in the trap as possession of live wild pigs is illegal. Bait may be used to take pigs as this is legal for deer in Kentucky, except that wildlife shall not be fed March 1-July 31 outside the curtilage of one's home.

Louisiana – Year-round shooting and hunting on private land during daylight hours with a valid LA basic hunting license. Year-round trapping with a valid LA basic hunting license on private land. Year-round snaring with a valid LA trapping license on private land. Night shooting from the end of February to the end of August on private land. Night shooting the remainder of the year on private land via permit. Year- round dog hunting on private land. They also may be harvested on certain WMAs during special seasons or concurrent with open hunting seasons. Aerial gunning via permit.

Mississippi – Hunting using legal hunting equipment (firearm, archery equipment) and trapping via box or corral trap with a free permit issued by the NC Wildlife Resources Commission. Special restrictions apply on state game lands.

Missouri – All methods of take are allowed on private property. Hunting feral hogs on public lands is prohibited,except for opportunistic take during deer and turkey season on select areas.

North Carolina – Hunting and trapping

Oklahoma – Hunting with firearms or archery equipment during daylight hours. Night shooting is allowed on private property with game warden notification. Trapping is allowed.

South Carolina – Harvest methods are not restricted on private lands other than the use of snares is not lawful.

Tennessee – Landowners and their designees are allowed to shoot over bait, spotlight and trap – once they receive an exemption issued by TWRA. Dogs are allowed with an agricultural emergency exemption issued by TWRA once certain conditions are met; these emergency exemptions are not renewable. A four-county experimental area exists allowing the use of dogs for control outside of major deer hunting seasons this requires an agricultural exemption. Harvest is allowed incidental to certain hunts on wildlife management areas and during bear-dog hunts. Individuals licensed to hunt bears may take wild hogs during any scheduled bear-dog hunt. Special permits may be obtained to take wild hog on the Big South Fork National River and Recreation Area during deer hunts and by small game hunters after the deer season. There are three control seasons on two specific WMAs where dog use is allowed.

Texas – Aerial gunnery permitted by landowner authorization. Traps, snares, bow, knife, dogs, any legal weapon.

Virginia – Nighttime hunting, bait, dogs and trapping are allowed, however DGIF requires that all pigs trapped be killed immediately and are not allowed to leave the trap site alive.

West Virginia – Bow, crossbow, and firearms are legal for wild boar within the four-county management area. There are no restrictions on taking feral swine.

3. Describe the hunting season and bag limits?

Alabama – Daytime hours only year-round, no closed season, and no bag limit on private land. Special night-time season on private and leased lands from May 1-August 31, dogs only, no firearms allowed, and no bag limit. Feral Swine and Coyote Nighttime license used on private or leased lands allows for the use of night hunting equipment, only during special season, February 11 - November 1.

Arkansas – Year-round hunting on private land with no bag limits. Public property varies by ownership type and inclusion into Wildlife Management Area designation; see section 2 above.

Florida – On private land, wild hogs may be taken 24-hours a day, year-round, with no size or bag limits. On most public hunting lands there is no bag or size limit, wild hogs are legal to take during daylight hours during most hunting seasons (e.g., prohibited during spring turkey season); wild hogs may be taken at night on many areas (e.g., wild hog-dog hunts).

Georgia – No closed seasons or bag limits on private land.

Kentucky – Wild pigs may be hunted year-round with no bag limit. Per KRS 150.360, wild pigs may only be hunted during legal daylight hours and may not be hunted at night.

Louisiana – Year-round daytime shooting and hunting on private land. No bag limit.

Mississippi – No limits and year-round hunting on private lands.

Missouri – No season or bag limit on private lands. Hunting feral hogs on public lands is prohibited, except for opportunistic take during deer and turkey season on select areas.

North Carolina – On private land, feral swine may be hunted year-round, day or night, using artificial lights and electronic calls. There is no bag limit, but a general hunting license is required. Restrictions apply on state game lands. Feral swine can be trapped year-round using box or corral traps only.

Oklahoma – No season or bag limit.

South Carolina – No seasons, limits, or weapons restriction on private lands during daylight. Special provisions for night hunting. Season and weapon restrictions apply on WMA and are consistent with the game season that is open on the WMA.

Tennessee – None. However, there is some incidental take during specified hunts on WMA's.

Texas – No season and no limit.

Virginia – The season for nuisance species is defined as a continuous open season, and there is no bag limit.

West Virginia – There is no season for feral swine. Within the four-county management area, archery season for wild boar runs from late September to the end of December. A firearms season for wild boar within this management area is open for one week (end of October to beginning of November). An additional firearms season (3-day season during first week of February) has been available since 2019. Hunting is allowed only by resident hunters. Annual bag limit is one wild boar.

4. Is hog hunting allowed on public land?

Alabama – Yes, hog hunting is allowed on public land and WMAs. On WMAs hogs may be harvested during any open season using weapons and ammunition approved for those hunts, and specific areas host special hog hunts. Open public land has no closed season and the same regulations apply as to private land.

Arkansas – Opportunistic take is allowed, as described in No. 2 above.

Florida – Yes, as per area-specific regulations. Wild hogs may be harvested on FWC-managed public hunting areas during spring/summer wild hog management hunts and during most other area-specific hunting seasons, including the widely accessible small game seasons. The Southwest Florida Water Management District and U.S. Fish and Wildlife Service also allow wild hog hunting on select public conservation lands where they are lead land manager.

Georgia – Yes, only during designated hog hunts and during any open season with the legal weapons for that season.

Kentucky – Yes, though no significant wild pig populations occur on WMAs.

Louisiana – Certain WMAs during special seasons, and/or concurrent with open hunting seasons.

Mississippi – Yes, only during on open game season with weapons and ammo allowed for that open season.

Missouri – Hunting feral hogs on public lands is prohibited, except for opportunistic take during deer and turkey season on select areas.

North Carolina – Yes. On state game lands, feral swine can be hunted during the open season for any game animal using equipment legal for take of that game species, and a permit is required for hunting outside of normal hours (½ hour after sunset to ½ hour before sunrise). Feral swine can be hunted using dogs only on game lands that allow use of dogs for hunting deer and bear (and only during the open season for those game species). Trapping feral swine on game lands requires written permission and is not granted for recreational purposes.

Oklahoma – Yes, during any open deer or turkey season, only weapons and methods appropriate for that season may be utilized to harvest wild pigs. During other times of the year wild pigs may be hunted during an open game season with weapons allowed for that open season. Four WMAs within the Feral Swine Eradication and Control Pilot Program areas are closed to hunting. No pigs may be removed from a WMA alive. Use of a firearm is prohibited on public lands at night.

South Carolina – Yes, with seasons and weapons restrictions.

Tennessee – No. However, two Tennessee WMA's have a short control seasons (two 5-day hunts for one and one 3-day hunt for the other) where dogs can be utilized. Also, wild hogs may be taken incidental to other hunts on certain specified Wildlife Management Areas. Individuals licensed to hunt bears may take wild hogs during any scheduled bear-dog hunt.

Texas – Yes.

Virginia – When there is an open hunting season, feral pigs may be hunted on public land in Virginia. It is illegal to have an uncased firearm on national forest or DGIF lands outside of the regular hunting season. During those months, feral pigs cannot be hunted on public land. DGIF has used administrative authority to close WMAs or portions of WMAs during trapping activity.

West Virginia – Yes. Only within the four-county management area.

5. Is a license required?

Alabama – A small game license is required for hunting hogs in Alabama. No license is required for depredation permits**.**

Arkansas – No license is required if hunting on private property. If on public land, the relevant license and permit for the appropriate season is necessary.

Florida – A hunting license is not required; however, on FWC-managed lands, a wildlife management area permit and any limited entry (quota) permits are required.

Georgia – Yes.

Kentucky – Yes, a resident or non-resident hunting license is required to hunt pigs in Kentucky; no additional tags are required. No license is required for resident landowners or tenants hunting on their own property. Big South Fork National River Recreational Area requires an additional hog hunting permit to hunt pigs.

Louisiana – A valid LA basic hunting license is required for shooting, hunting, or cage trapping. A valid LA trapping license is required for snaring.

Mississippi – Yes.

Missouri – No license is required for taking feral hogs on private land. Hunting hogs is not allowed on public land.. A license is required for anyone afield with a firearm during any firearm deer or turkey seasons.

North Carolina – Yes, hunters need a general hunting license to hunt feral swine. To trap feral swine, they need a hunting or trapping license and a free feral swine trapping permit issued by the NC Wildlife Resources Commission.

Oklahoma – Private land does not require a license. Public land requires a license. In addition, on public and private land, if hogs are pursued during an open firearms deer, elk, antelope or bear season, the hunter must possess a filled or unfilled tag appropriate for the big game season that is open. Permits which give exceptions to the big game tag requirement are given to landowners who are experiencing hog damage.

South Carolina – Yes, statewide on private and WMA lands.

Tennessee – No. Wild hogs are not legal game animals; therefore, there are no licensing requirements.

Texas – No license is required to take feral hogs, with landowner consent, on private land. Hunter education requirements apply to public and private land.

Virginia – Yes; to hunt any nuisance species, a basic hunting license is required.

West Virginia – Yes.

6. Is dog hunting allowed on public property?

Alabama – Dog hunting is permitted on open public National Forest Service lands. State-managed and owned WMA and National Wildlife Refuge properties have specific area regulations, most of which prohibit hog hunting with dogs.

Arkansas – No. The opportunistic take of feral hogs with dogs is prohibited.

Florida –Yes, as per area-specific regulations.

Georgia – Yes, but this is limited to a few quota hunts.

Kentucky – Yes; however, not year-round. No significant wild pig populations occur on WMAs. Per 301 KAR 3:010: (4.) Unless specified otherwise in 301 KAR 2:049, shall not allow an unleashed dog from March 1 until the third Saturday in August, except when participating in: (a.) A department- authorized field trial; (b.) The spring squirrel season; or (c.) Training a retriever or other water dog, if: 1. The activity is authorized by a sign at the body of water; and, 2. The dog remains leashed except while actively training in or within 100 feet of the body of water.

Louisiana – Yes, on certain WMAs during special seasons.

Mississippi – Yes, but restricted to specific public areas.

Missouri – Dog hunting is prohibited on public land in Missouri. ~~land owned, leased or managed by the MDC and some other agencies.~~

North Carolina – Yes, feral swine can be hunted using dogs on game lands that allow use of dogs for hunting deer and bear (and only during the open season for those game species).

Oklahoma – Outside of deer and turkey seasons, when it is legal to pursue game species with dogs, you may huntwild pigs with dogs. Four WMAs within the Feral Swine Eradication and Control Pilot Program areas are closed to hunting.

South Carolina – Yes, in certain areas and with restrictions.

Tennessee – Two Tennessee WMAs have a short control season (two 5-day hunts for one and 3 days for the other) where dogs can be utilized. Also, individuals licensed to hunt bears may take wild hogs during any scheduled bear-dog hunt.

Texas – It may be permitted by the manager of the property; however, there are no areas permitting dog hunting at this time.

Virginia – During any hunting season that allows the use of dogs, pig hunting with dogs is allowed on public land.

West Virginia – No.

7. Is dog hunting allowed on private property?

Alabama – Dog hunting is allowed on private property with landowner permission.

Arkansas – Yes, with landowner permission any time of year.

Florida – Yes, with landowner permission.

Georgia – Yes.

Kentucky – Yes.

Louisiana – Yes, 365 days a year, day or night.

Mississippi – Yes.

Missouri – Yes.

North Carolina. Yes, with landowner permission

Oklahoma – Yes.

South Carolina – Yes, statewide.

Tennessee – No, unless a landowner possesses an agricultural emergency exemption or has an exemption in the four county experimental areas where dog use is authorized.

Texas – Yes, with landowner permission.

Virginia – Pig hunting with dogs is allowed year-round on private land.

West Virginia – No.

8. Are captive hog hunting facilities allowed?

Alabama – Hunting feral hogs inside enclosures is allowed, although release or stocking of feral hogs is not allowed.

Arkansas – No

Florida – Yes.

Georgia – Yes.

Kentucky – No, see KRS 150.186.

Louisiana – Yes. With LDAF permit.

Mississippi – Not specifically.

Missouri –MDC permits a number of facilities that were grandfathered in, but no new permits are being issued.

North Carolina – We do not provide permits for or otherwise regulate captive hog hunting facilities. It is unlawful to transport or release live, feral hogs from any trap.

Oklahoma – Yes, if the facility is licensed.

South Carolina – Yes, but must use captive-raised hogs.

Tennessee – Yes, but no new facilities can be permitted. (i.e., moratorium)

Texas – Yes. Only male swine may be released into a facility. Facility requirements include owner/operator having a valid hunting license from TPWD, a swine-proof fence approved by Texas Animal Health Commission, and

adherence to TAHC record-keeping requirements.

Virginia – Hog hunting facilities are allowed only under a permit through VDACS (§ 3.2-6036). There currently are no permitted captive hunting operations in Virginia. To be in compliance, facilities also would need a permit from DGIF to possess the pigs within the enclosure (4VAC 15-30-40).

West Virginia – Yes.

9. May hogs be hunted at night?

Alabama – Feral Swine Special Nighttime Season use of dogs only on private or leased lands, May 16 - August31. Feral Swine and Coyote Nighttime license used on private or leased lands allows for the use of night hunting equipment, only during special season, February 11 - November 1. They may not be hunted at night on public property.

Arkansas – Hogs may be hunted at night on private property with landowner permission. The AGFC encourages landowners to contact local wildlife officers before night hunting. They may not be hunted at night on public property.

Florida – Yes; on private land with landowner permission and on certain public hunting areas as per area-specific regulations.

Georgia – Yes. They may not be hunted from a vehicle with a spotlight without a permit (easily obtained). They may be hunted at night with a portable light not attached to a vehicle without a permit.

Kentucky – No.

Louisiana – Yes, year-round on private land with LA basic hunting license. Hunter must call parish sheriff within 24 hrs. before going hunting OR immediately upon shooting at a feral hog. No night hunting on public land.

Mississippi – Yes.

Missouri – Yes on private property, but not on public property.

North Carolina – Yes, on private lands with landowner permission. On public lands, a special permit is required.

Oklahoma – Night hunting with firearms is allowed on private property with game warden notification. Feral hog hunting is allowed on some public lands at night without a firearm outside of deer and turkey seasons.

South Carolina – – Yes, but property must register with SCDNR annually. Registration provides for year- round night hunting with no restrictions on weapons, lighting systems including night vision, thermal, etc.A harvest report must be completed prior to renewing registration. They can also be taken with a depredation permit issued by law enforcement.

Tennessee – Only with a landowner exemption. However, TWRA refers to these activities as “control”, not hunting.

Texas – Yes.

Virginia – Yes, they can be hunted at night but not from a vehicle.

West Virginia – No.

Section Summary and Recommendations

Generally, wild hogs are not considered a game animal in the WHWG member states. Wild hogs are given a variety of classifications such as: nuisance animals, non-game animals, feral animals, outlaw quadruped, or exotic animals. Harvest methods and hunting seasons are generally unrestricted on private property. Some restrictions exist for public land regarding dog hunting or open seasons. However, Tennessee has adopted an alternative strategy of reducing the incentive to translocate hogs by restricting the hunting of hogs. Only two Wildlife Management Areas in Tennessee allow hog hunting, and hog hunting is not allowed on private property unless a special landowner exception or exemption is obtained.

The WHWG recommends that state game and fish agencies examine their current approach to hog management and adopt strategies that effectively address each state's unique circumstances. The WHWG has developed a toolkit to help states with small or non-existent populations of wild hogs. This toolkit contains suggested agency and legislative actions to help reduce the spread of wild hogs.

Section C: Population Status

1. Do you have a statewide population estimate, and how is it derived?

Alabama – There is no current statewide population estimate that is accurate. Feral hogs can be found in isolated populations in all 67 counties in Alabama.

Arkansas – No formal estimate.

Florida – Between 500,000 and 1 million animals. This is a rough estimation commonly reported in literature, based on extrapolation of limited data sets.

Georgia – No.

Kentucky – No formal estimate.

Louisiana – Estimates based on hunter harvest. During the2022-23 hunting season hunters harvested 393,000 feral hogs. We estimate the population to be at greater than 900,000 statewide based on those harvest numbers.

Mississippi – No formal estimate. Populations documented in all 82 counties.

Missouri – No formal estimate.

North Carolina – No formal estimate.

Oklahoma – Recent estimates based on hunter harvest suggest the population to be over 750,000. During the

2019 annual harvest survey (year 3 of the Game Harvest Survey), feral hog harvest by licensed resident hunters indicated > 500,000 feral hogs harvested by hunters and trappers. This survey does not sample those without a hunting license (not required to hunt hogs on OK private lands), and it didn't include non-residents (lots of TX hunters in OK).

South Carolina – No formal estimate.

Tennessee – No formal estimate.

Texas – 2.5 million (95%PI = 0.6-7.3 million) (Lewis et al., 2018).

Virginia – DGIF does not have a measured or defined statewide population estimate. However, empirical observations from DGIF and USDAWS staff suggest a population between 2,000-4,000 pigs statewide. This estimate is based from "staff experience" from on-the-ground observation reports, harvest reports and our best educated guess based on above data.

West Virginia – Estimates based upon hunter harvest suggest 250-450 wild boar within the four-county management area, during the 2022 hunting season. No formal estimate for feral swine.

2. What percentage of your state's counties have hogs?

Alabama – 100 percent of Alabama counties have populations of feral hogs, though some have only isolated small populations.

Arkansas – All 75 counties have reported hogs. Levels of infestation vary by habitat type, location and land use practices.

Florida – 100 percent (all 67 counties), although density varies.

Georgia – 95 percent.

Kentucky – Kentucky currently has three known breeding populations and seven areas of concern, covering twenty-two counties, approximately 26% of the state. Although pig sightings have occurred sporadically in areas of concern, there is no evidence of breeding populations in these areas. These numbers do not include single abandoned pot-bellied pigs that occur anywhere across the state.

Louisiana – All 64 parishes have reported hogs, although about 75 percent have significant populations.

Mississippi – 100 percent.

Missouri – Approximately 20 - 25 percent of Missouri's counties have feral hogs. In some of these counties hogs are only found in a small portion of the county.

North Carolina – About 75% of NC counties report feral swine presence to some extent. The percentage of counties with significant densities of feral swine is suspected to be much lower but is currently unknown.

Oklahoma – 95 percent. The three panhandle counties and Grant County in far north central Oklahoma are currently considered to be free of hogs.

South Carolina – Hogs are reportedly taken in all 46 counties.

Tennessee –80 percent.

Texas – 99 percent, excluding El Paso County (USDA 2018).

Virginia – 26 percent have had reports of hog sightings (25 of 95 counties). Since 2014 USDA-WS staff has documented escaped domestic pigs in 28 of 95 counties.

West Virginia – 7 percent for feral swine (4 of 55 counties), 4 percent for wild boar (2 of 55 counties).

3. Is your state's hog distribution current on the USDA APHIS National Feral Swine Map?

Alabama – Alabama's hog distribution on this map is updated by ADCNR or USDA WS's personnel as needed.

Arkansas – Yes.

Florida – Yes.

Georgia – Yes.

Kentucky – Yes

Louisiana – Yes.

Mississippi – In progress.

Missouri – Yes.

North Carolina – Yes.

Oklahoma – Yes.

South Carolina – Yes.

Tennessee – No, the state's hog distribution is not current on the SCWDS/APHIS National Feral Swine Map.

Texas – No

Virginia – Yes.

West Virginia – Yes.

Section Summary and Recommendations

Few of the WHWG member states have formal wild hog population estimates. However, states understand the general distribution of wild hogs within the state. The USDA APHIS National Feral Swine Map has been updated by some agencies, but others have not provided recent information.

The WHWG recommends that state game and fish agencies collectively implement a standardized monitoring program to detect changes in wild hog distribution. Results of surveys should be used to update the USDA APHIS National Feral Swine Map.

Section D: Disease Status

1. Does your state conduct serological disease testing for swine brucellosis and pseudorabies?

Alabama – Serological disease testing for swine brucellosis and pseudorabies in feral hogs is conducted by USDA WS's personnel with assistance from ADCNR personnel.

Arkansas – Yes. The AGFC, in coordination with USDA Wildlife Services, has tested over 1411 feral swine in 39 of 75 counties across the state since 2008. Disease surveillance is ongoing in the state.

Florida – The State does not conduct routine testing on wild populations; however, past sampling efforts have suggested that about a third of feral swine in Florida are infected with brucellosis and pseudorabies. The USDA Wildlife Services performs limited surveillance testing in Florida.

Georgia – No.

Kentucky- Yes, serological disease testing for swine brucellosis and pseudorabies is conducted by USDA WS's personnel with assistance from KDFWR personnel.

Louisiana – Yes.

Mississippi – Yes, via USDA WS.

Missouri – Yes, currently via USDA WS (Note: the brucellosis test doesn't differentiate between the various types of brucellosis.)

North Carolina – Yes. USDA Wildlife Services conducts feral swine surveillance for swine brucellosis and pseudorabies. NC Department of Agriculture also does some limited testing on feral swine.

Oklahoma – Yes.

South Carolina – Yes, by USDA -WS periodically. Both are endemic here so no need to test.

Tennessee – Yes, we conduct serological disease testing for swine brucellosis and pseudorabies.

Texas – Yes; USDA-WS attempts to collect 550 samples annually for each. Pseudorabies exposure is widespread and frequent though active infection is not monitored. Campbell et al. (2008) detected pseudorabies exposure in 35% of samples. Brucellosis is rare with seroprevalence ranging from 1-24% (Pederson at al. 2012; Campbell 2008; Wyckhoff 2005, 2009). There were 25 human cases in 2007 (CDC 2009).

Virginia – Serological testing for both diseases is conducted in Virginia and is coordinated through USDA, WS.

West Virginia – Yes, serological disease testing for swine brucellosis and pseudorabies is coordinated by USDA WS's personnel.

2. Any other diseases?

Alabama – Serological disease testing for classical swine fever and leptospirosis is conducted on feral hogs in Alabama.

Arkansas – Yes; we have historically tested feral swine for a wide range of diseases. We currently test for classical swine fever, pseudorabies, swine brucellosis, influenza A virus, toxoplasmosis, trichinosis, and leptospirosis.

Florida – Any feral swine found sick/dead of unknown causes are completely necropsied at the FWC's Wildlife Research Laboratory. We also work cooperatively with USDA Wildlife Services on swine disease surveillance projects.

Georgia – No.

Kentucky – Yes, KDFWR in coordination with USDA Wildlife Services, tests for classical swine fever.

Louisiana – Leptospirosis, swine influenza, classical swine fever, African Swine fever, and PRRS. Additionally, samples are archived for future disease testing.

Mississippi – Yes; African swine fever (38), classical swine fever (499), foot-and-mouth disease (34), hepatitis E (196), leptospirosis (10+), pseudorabies virus (561), swine brucellosis (558) and swine influenza virus (375).

Missouri – Yes, currently via USDA, APHIS, WS; swine fever, swine influenza virus, toxoplasmosis, trichinosis and leptospirosis.

North Carolina – USDA, APHIS, WS also conducting testing for classical swine fever, swine influenza, hepatitis E virus, trichinella, toxoplasma and, most recently, leptospirosis.

Oklahoma – Yes; classical swine fever/hog cholera, hepatitis E virus, swine influenza-H1N1, toxoplasma gondii, trichinella spiralis and other parasites.

South Carolina – Not familiar with any but sure some are there.

Tennessee – No, we do not test for diseases other than brucellosis and pseudorabies.

Texas – USDA-WS attempts to collect 550 samples annually for classical swine fever and Influenza A Virus-Swine. Leptospirosis, salmonella, and tularemia have been detected by researchers.

Virginia – Classical swine fever and swine influenza.

West Virginia – Classic swine fever, toxoplasmosis, and leptospirosis.

3. If so, what disease rates are present?

Alabama – The brucellosis and pseudorabies annual infection rates vary from 8-10 percent, although local population rates vary tremendously. No classical swine fever has been found. Leptospirosis has been found in 10 Alabama counties, with ongoing testing.

Arkansas – Test results only reflect serological positive samples and indicate exposure. Results can vary tremendously from one area to the next. The prevalence rates from 2008-2022 were as follows: Trichinosis 8.29% Toxoplasmosis 13.96% Leptospirosis 47.44% Swine Influenza Virus 0% Influenza A 2.52% Swine

Brucellosis 15.33% Hepatitis E 0.73%.

Florida – Prevalence has not been determined for diseases other than pseudorabies and brucellosis.

Georgia – Not applicable.

Kentucky – Disease testing is conducted by USDA Wildlife Services, with assistance from KY Dept. of Fish and Wildlife. Swine brucellosis has not been detected in KY for many years. Pseudorabies has been detected at a rate of <1%. In 2021, only 2 pigs were serologically positive for pseudorabies.

Louisiana – 4.5 percent swine brucellosis statewide and 12 percent pseudorabies statewide. Leptospirosis titers occur at 80% seroprevalence with 12% being high titers indicating current or recent infection. Some locations have much higher prevalence than the statewide average.

Mississippi –I am uncomfortable with labeling these as disease rates. We conduct serological tests, which show us exposure but not active infections. Therefore, you cannot divide the number tested by the number positive and come up with an infection rate, or say a disease is more or less prevalent in a certain area. What we can derive from this data is presence or absence. If one pig shows positive for brucellosis or pseudorabies in a given population, we know it is present and assume it will persist at some level from year to year. Prevalence is highly variable and is affected by many population-level factors and environmental conditions. We have found evidence of PRV in 10 counties (110 seropositive individuals out of 1140 that were tested for a 9.7% seroprevalence statewide). Brucellosis has been detected in four counties (34 seropositive individuals out of 1102 that were tested for a 3 % seroprevalance statewide). Leptospirosis titers occur at 62% seroprevalance statewide (305 seropositive individuals out of 490 that were tested). One seropositive hepatitis E sample in 2012. Some locations have a much higher seroprevalance than the statewide average.

Missouri – I don't think we can accurately address this question in Missouri because we don't know how representative our sample sizes are of the entire population. Brucellosis and pseudorabies results appear to be similar to other states with established feral swine populations. The only exact rate that can be provided is that we have found no classical swine fever in feral swine, which is good since the nation is considered CSF-free in domestic and wild hogs. We have positive samples indicating exposure to all the other pathogens listed above.

North Carolina – Actual disease prevalence rates have not been identified at the landscape scale.

Oklahoma – Many exposure rates vary significantly based on which part of the state is sampled. The southeastern part of the state generally has the highest rates, then the southwest, then the northeast, with northwestern Oklahoma having the lowest exposure rates.

South Carolina – Not applicable.

Tennessee – In 2017, TWRA personnel submitted samples from 109 wild hogs for brucellosis and pseudorabies testing. Seven (6.4%) tested positive for brucellosis and one tested positive for pseudorabies. Positive titers for brucellosis were higher than for 2016-2017 (1.6%). As noted by Leiser et al. (2013), seropositive results for swine brucellosis can yield false positives with other microbes so caution is needed in interpreting these results alone. Since these results, TWRA has discontinued this practice.

Texas – USDA-WS attempts to collect 550 samples annually for classical swine fever, and Influenza A Virus-Swine. Leptospirosis: 21 % of swine sampled in 18 counties had been exposed (Pedersen et al. 2015); tularemia: 33-59% of adults in Bell/Corryel and Crosby counties (Hoffarth 2011). Live influenza A Virus-Swine has been

detected at very low rates (<1%, *N*=605 in 2015) in preliminary work. Yet serological antibody tests indicate higher rates of exposure. Active salmonella infections (as detected in fecal samples) indicate rates of infection as high as 50%.

Virginia – In 2006, two hog hunting enclosures and a breeding facility were depopulated; 14.9% (14/94) were brucella positive via culture and 21.3% (20/94) were seropositive for PRV. Additionally, PRV has been detected in two focal wild hog populations in Virginia. Swine Brucellosis was also detected in 2016 in another focal wild hog population.

West Virginia – The most recent detection has only been leptospirosis at less than 10% of samples. No detections occurred with the 2022 samples.

4. Does your agency offer public education to hunters on measures of zoonotic disease avoidance?

Alabama – ADCNR and partners offer public education on measures of zoonotic disease avoidance to hunters through publications, web articles and feral hog seminars across the state.

Arkansas – Online information, seasonal regulation guidebooks, pamphlets and hog management workshops discuss taking precautions.

Florida – Yes. Public education is provided each year in printed hunting regulations and through periodic press releases. Information is also provided on the FWC website.

Georgia – Yes, in our feral hog management brochure and an advertisement in the hunting regulations guide.

Kentucky – General disease concerns relating to wild pigs are noted on our department wild pig website. In addition, each landowner that decides to keep the pig carcasses is provided information on the risks of diseases. They are encouraged to cook meat thoroughly to 170^0 F and use gloves while processing the animal.

Louisiana – Yes. Public lectures inform hunters of the risks associated with handling feral swine. Hunter educators are also instructed on safe handling techniques. Information is compiled to put on the LDWF website.

Mississippi – Yes.

Missouri –Shooting feral hogs is discouraged by our agency.

North Carolina – Yes, we provide information online about safe carcass and meat handling for hunters and include this information in hunting and meat processing workshops.

Oklahoma – Yes, infrequently.

South Carolina – We provide guidance to deer and hog hunters about PPEs related to handling and dressing carcasses.

Tennessee – Online information, seasonal regulation guidebooks, pamphlets and instruction during hog control workshops.

Texas – Yes.

Virginia – Although we do not have an outreach program specifically focused on zoonotic diseases, recommended biosecurity measures for field dressing wildlife, encouraging the reporting of visibly sick wildlife, etc., is included in other outreach campaigns.

West Virginia – Yes, through distribution of USDA pamphlets.

Section Summary and Recommendations

Disease testing for swine brucellosis (SB) and pseudorabies (PRV) is conducted by the majority of WHWG member states, often in collaboration with USDA Wildlife Services personnel. The intensity of sampling often varies by locality within each state, and examination for diseases other than SB or PRV is inconsistent among states. The majority of WHWG member states offer a variety of educational opportunities to hunters on measures of zoonotic disease avoidance.

The WHWG recommends that state game and fish agencies work with the Southeastern Cooperative Wildlife Disease Study at the College of Veterinary Medicine at The University of Georgia to identify any disease monitoring needs and develop a protocol to address those items identified. The WHWG recommends state agencies share information about successful zoonotic disease avoidance programs to those member states that do not currently offer such information.

Section E: Damage

1. Do you have monetary estimates for damage to private property?

Alabama – There are no accurate monetary estimates for damage to private property by feral hogs in Alabama.

Arkansas – A 2018 statewide assessment asked 476 respondents about feral hog activity over the previous 5 years. A disproportionate number were selected in south Arkansas where feral hogs are more numerous. These respondents reported $5.5 million in damages to crop, forest, pasture, and other land types, with 77% reporting lethal removals of feral hogs.

Florida – Estimated row crop losses in northern Florida of $1,824,675.

Georgia – $57 million. UGA survey in 2011.

Kentucky – No

Louisiana – Yes. The LSU AgCenter released the results of an agricultural damage survey that revealed 91.1 million dollars of annual agricultural damage in 2022.

Mississippi – $60-70 Million annually according to MSU Extension Service research.

Missouri – No.

North Carolina – No.

Oklahoma – No.

South Carolina – No.

Tennessee – The estimated economic value of statewide damage caused by wild hogs in 2015 was $26.22 million whereas the cost incurred in control and eradication was an estimated at $2.09 million. The net direct and indirect impacts of property damage and management activities on the state's economy was estimated to be $32.8 million in lost industrial output, $4.6 million in lost labor income, and 332 jobs or job equivalents affected.

Texas – Agriculture, $52 million; $7 million in control.

Virginia – We do not have an overall estimate, but we have a few site-specific damage estimates.

West Virginia – No. During 2022 the estimated damage was approximately $15,000 for crop fields and labor costs for remediation work.

2. Describe observed damage to public property.

Alabama – Observed damage to public property includes rooting on WMA wildlife openings and agricultural areas, degradation of water and stream quality, damage to timber, damage to wetlands, damage to endangered plant communities, and competition with native wildlife resources for natural and supplemental wildlife food sources.

Arkansas – Rooting and wallowing in wildlife openings, supplemental food plots, native warm season grass stands, road damage, levee damage, archeological site disturbance, military base range damages, water quality degradation, and sensitive habitat damages.

Florida – Habitat and landscaping disturbance, predation on rare species, loss of food plots, destruction of timber resources, and damage to roads and water-control structures.

Georgia – Destruction of wildlife openings, sea turtle nests, and damage to dikes.

Kentucky- No significant wild pig populations on WMAs. Land Between the Lakes National Recreation Area has experienced some damage to forests, agriculture, and cemeteries. Big South Fork National River and Recreation Area has experienced some damage to rare orchids, including the white fringeless orchid, which is a candidate for federal listing.

Louisiana – Rooting, erosion, forest seedling destruction and mast loss. Severe damage to coastal marshes.

Mississippi – Native wildlife habitat, roads, agriculture, livestock pastures, hay, wildlife plantings, levees, timber and reforestation.

Missouri – Rooting, wallowing, damage to natural communities, damage to rare plant species, damage to timber resources, degradation of water quality, fence damage hay and crop damage.

North Carolina — Damage on public lands primarily involves impacts to natural resources (including aquatic habitat, streambanks, rare plants), and wildlife plantings.

Oklahoma – There has been damage to agricultural crops on public land. Revenue from agricultural leases has been impacted on WMAs with high hog densities. Wildlife food resources, both natural and agricultural, have been reduced. Native plants that provide food for hogs and are sensitive to disturbance have diminished in abundance. This is most evident with native plants that have rhizomes, tubers, and bulbs.

South Carolina – All damage that is possible.

Tennessee – Food plots, golf courses, timber stands, row crops, and levees.

Texas – Rooting, predation, crop damage, fence damage, depredation on native flora and fauna, fences, pasture damage, loss of forage time for beef cattle, golf courses.

Virginia – The primary damage is to lands on Back Bay National Wildlife Refuge and False Cape State Park. Both areas are barrier islands and suffer significant damage to dunes, predation of shorebird nests and other ecological damage in the refuge and park. The remainder of the pigs on public land exists in forested ecosystems in George Washington National Forest and Cavalier WMA, which has reported minor agricultural damage. Most populations occur on private land so there is limited damage on public land at this point.

West Virginia – Damage includes rooting upon golf courses, gardens, crop fields, yards, pastures, and forests. Damage reports include promoting erosion upon reclaimed surface mine sites.

3. Does your agency pay for damage to private property by hogs?

All states responded no.

Section Summary and Recommendations

Monetary estimates of wild hog damage are not available for most WHWG member states. However, the available estimates do highlight the incredible level of economic damage caused by wild hogs. Additionally, there are tremendous costs to wildlife and natural resources that are not accounted for in many damage estimates. No WHWG member states reported paying for wild hog damage to private property.

The WHWG recommends that state game and fish agencies examine methods of obtaining damage estimates. Impacts on natural resources should be documented and utilized in educational programs. These data can provide justification when existing wild hog laws and regulations require modification.

Section F: Control Efforts

1. What is your management goal for public land?

Alabama – Reduce, and when feasible exterminate, populations and decrease damage on areas historically occupied by hogs, and prevent new populations from establishing unoccupied areas.

Arkansas – To maintain, reduce or eliminate, where feasible, feral hog populations.

Florida – The FWC has identified no general management goal for public lands. Rather, wild hog management goals vary by property and management agency and control efforts are taken as needed (e.g., to protect listed plant species). These range from a goal of eradication to management at tolerable levels of impact.

Georgia – Keep damage at a minimum. The barrier islands are more actively managed due to seas turtle nests.

Kentucky – To prevent negative impacts of wild pigs on native fish and wildlife populations, wildlife habitat, and agriculture through adaptive science-based management actions that will eradicate existing wild pig populations and prevent the establishment of new populations.

Louisiana – Technicians shoot and trap. The public is allowed to shoot during certain seasons. Special trapping and dog hunting seasons on certain WMA's. Aerial culling used on several WMAs. Primary goal is damage control and population management.

Mississippi – Reduce population impacts through agency efforts to bait, trap and kill wild hogs on all WMAs with hog populations. Continue reduction of "hunting" opportunities on public lands.

Missouri – Total elimination, statewide.

North Carolina – Eliminate populations wherever feasible. Otherwise minimize populations and damage.

Oklahoma – The goal for land owned or managed by the Oklahoma Department of Wildlife Conservation is to minimize the feral hog population as much as possible with the very limited resources available.

South Carolina – Elimination or minimization.

Tennessee – Eradication

Texas – TPWD has an internal policy for land it manages: eliminate or reduce feral pigs on our property and to maximize public hunter opportunity and experience as it relates to native flora and fauna.

Virginia – Eradicate all feral hogs focusing on areas with known populations and eliminating new hotspots.

West Virginia – Allow for regulated hunting seasons within the four-county wild boar management area based on population density. Prevent exposure of these wild boar to feral swine populations. Provide hunting opportunities for 1,500 wild boar hunters. Eliminate, if possible, feral swine populations.

2. What is your management goal for private land?

Alabama – To educate private landowners about the destructive nature of feral hogs and equip them, through education and technical guidance efforts, with the tools they need to successfully control or manage hog populations.

Arkansas – To provide private landowners with information on feral hogs so that they can control them on their property. The Arkansas Game and Fish Commission may assist with trapping using the whole sounder approach, given a voluntary cease of recreational hunting in the area through a cooperative base.

Florida – Private landowners are allowed to manage hogs on their property with minimal interference from the state.

Georgia – Provide technical guidance for hog control.

Kentucky – To prevent negative impacts of wild pigs on native fish and wildlife populations, wildlife habitat, and agriculture through adaptive science-based management actions that will eradicate existing wild pig populations and prevent the establishment of new populations.

Louisiana – LDWF provides technical guidance for landowners regarding control of feral swine. Additionally, a few traps are available through Soil and Water Conservation District offices for use by landowners. Aerial hog control permits are available on an as-need basis after application review. The

primary goal is to assist landowners with population management and damage control.

Mississippi – To educate the public on impacts, and efficient and effective control measures.

Missouri – Total elimination statewide.

North Carolina – Provide guidance and resources to help landowners eliminate populations wherever feasible, or at least to minimize populations and damage. This includes discouraging recreational hunting as a management tool and promoting whole-sounder removal methods such as corral trapping.

Oklahoma – To educate private landowners on the negative impacts of feral hogs on the environment; and educate them on the use of effective control techniques. Allow private landowners to control hog populations with the minimum amount of regulatory interference.

South Carolina – Elimination or minimization.

Tennessee – Minimize agricultural damage, eliminate range expansion, and eradicate where feasible.

Texas – To provide technical guidance on the biology and ecology of the feral pig, and to ensure the landowner understands the impacts to native flora, fauna and respective goals for their property.

Virginia – Provide education, support and technical guidance to individuals in the removal of pigs from their property or leased lands. Support USDA-WS feral swine control efforts to the extents budgets and time constraints allow.

West Virginia – Same as above.

3. Which personnel coordinate hog control efforts?

Alabama – Hog control efforts are coordinated by wildlife biologists on public land. Private landowners often seek assistance through the ADCNR, NRCS, Wildlife Services, or AL Extension.

Arkansas – Arkansas – The Arkansas Game and Fish Commission, Arkansas Department of Agriculture, and United States Department of Agriculture each have one feral hog coordinator position. These individuals direct statewide control efforts within their own agency and collaborate together to effectively control feral hog populations on public and private land.

Florida – Other than public hunting, most wild hog control efforts are outsourced to the private sector or USDA Wildlife Services. Technical assistance is provided by FWC staff and county extension agents via phone and electronic outreach and public workshops. The inter-agency Florida Feral Hog Working Group (FHWG) was created to better coordinate feral hog policy, research, outreach, control, hunting and other stakeholder services between agency and non-governmental organization partners. For information about the FHWG, please contact Matthew Chopp at matt.chopp@myfwc.com or (386) 754-1299.

Georgia – GADNR on public land.

Kentucky – KDFWR Wild Pig Program biologist and USDA APHIS Wildlife Services

Louisiana – Regional LDWF biologists. The Louisiana Feral Hog Management Advisory Task Force operates to keep LDWF, LDAF, and the La. Legislature informed of feral hog issues and advocates policies to help curtail feral

hog population and damage expansion. For more information about the LaFHMATF please contact Jim LaCour at jmlacour@wlf.la.gov or (225) 765-0823.

Mississippi – Wildlife coordinators, WMA biologists and WMA personnel.

Missouri –The Wildlife Section within the Statewide Resource Management Branch of the MDC is the lead for internal feral hog coordination statewide. However, the members of the Missouri Feral Hog Elimination Partnership have developed a unified Incident Command Structure to lead elimination efforts statewide for all members."

North Carolina – USDA-Wildlife Services is the primary provider for hog control efforts on private land in NC. NC Department of Agriculture also conducts some removals on private property as part of their disease surveillance efforts. The NC Wildlife Resources Commission and other public entities (e.g., national parks) coordinate with USDA-Wildlife Services to control feral swine on public lands.

Oklahoma – ODA Wildlife Services Branch on private land.

South Carolina – Wildlife Section personnel, who work and/or reside on WMAs. The public on private land.

Tennessee – TWRA Statewide Wild Hog Program Leader, TWRA regional wild hog biologists, and APHIS WS.

Texas – APHIS, WS (federal); landowners.

Virginia – Regional staff coordinates the control effort on public lands. USDA-WS staff focus on private lands.

West Virginia – Dr. James Maxwell with WVDOA and John Forbes with USDA WS.

4. Which personnel conduct hog control efforts?

Alabama – Wildlife biologists, Wildlife Services, and technicians conduct hog control efforts on WMA lands with some assistance from conservation enforcement officers. Conservation enforcement officers focus efforts on reporting feral hog transport violations.

Arkansas – Several dozen wildlife technicians, biologists, wildlife officers and other field personnel spend part of their time throughout the year on hog control. USDA, APHIS, WS has conducted hog control work on selected WMAs. The AGFC is also employing part time employees, specifically for feral hog control, on selected USFS/AGFC cooperatively managed WMAs.

Florida – Private landowners may control wild hogs on their property at their discretion. Public Hunting Areas Biologists may install wild hog hunting opportunities on public lands in response to landowner request for hog control and to increase public hunting opportunities.

Georgia – GADNR (public land) and USDA, WS (public and private for hire).

Kentucky –Wild pig program biologist and regional biologists opportunistically provide active control assistance as schedules permit. USDA, APHIS, WS trap wild pigs in counties with breeding populations and are also on contract for removal efforts via aerial gunning.

Louisiana – Regional LDWF biologists, technicians and hunters.

Mississippi – WMA personnel.

Missouri – Feral hog elimination is an agency priority for MDC so staff in all Branches of the Department participate in elimination efforts but all of the full-time feral hog specialists are in the Wildlife Section.

North Carolina – USDA-Wildlife Services is the primary provider for hog control efforts in NC. NC Department of Agriculture also conducts some removals on private property as part of their disease surveillance efforts. Some licensed Wildlife Control Agents also provide hog control services to private landholders.

Oklahoma – USDA Wildlife Services, private landowners or their agents (private land). WMA staff and WS each do limited control work on public lands.

South Carolina – SCDNR Wildlife Section personnel, who work and/or reside on WMAs. Private landowners on private land. USDA-WS on public and private land.

Tennessee – Personnel from various land-managing agencies within the state, USDA APHIS-WS, private landowners and their designees

Texas – WS at landowner request (public or private land); State, county, and local land authorities; private landowners or their agents.

Virginia – Regional staff, including district wildlife biologists and WMA supervisors in conjunction with USDA-WS.

West Virginia – Kevin Groves and Jason Miller with USDA WS and personnel with WVDNR.

5. Describe the effectiveness of control efforts.

Alabama – Control efforts vary depending on area effort, resource availability and local population. Long-term control methods have shown to decrease damage, observance of hogs, and prevent movement into new areas. Eradication is not feasible in most situations.

Arkansas – To date, effectiveness has varied due to the habitat conditions and initial population size. Trending data suggests that trapping, in addition to other control methods, has controlled populations in areas of "island" habitats. Sustained (> two years) trapping of entire sounders and selective shooting efforts has resulted in significantly reduced populations and damages on several WMAs comprised of bottomland hardwood forest habitats, generally surrounded by significant acreages in agricultural production.

Florida – Public hunting can be effective at limiting damage impacts. The USDA WS program in Florida removed at least 4,569 feral hogs during FY 2020 by aerial gunning (1,339), trapping, and ground shooting, including effective eradication on three island/key locations.

Georgia – Very effective where done, but a lot of money and effort.

Kentucky – Each of Kentucky's wild pig populations continues to be relatively small and isolated; addressing entire populations remains possible. The KDFWR perceives the greatest opportunity to eradicate wild pig populations is the partnership between KDFWR and USDA Wildlife Services. This partnership has allowed us to utilize a team approach, pool our resources, and share data to be more successful at wild pig eradication throughout

KY. The results of these efforts are significantly reducing and eradicating pig populations.

Louisiana – Efforts are not keeping up with population expansion.

Mississippi – Efforts began in late 2011; 2012-2019 success is at least moderate.

Missouri – We use a variety of methods including trapping, night shooting, and aerial gunning. We have been seeinga lot of success We have eliminated feral hogs from approximately 60% of the watersheds that they occurred in back in 2016.

North Carolina – USDA-Wildlife Services control efforts (primarily corral trapping and night shooting) have been effective at controlling swine populations on some individual properties. Illegal reintroductions for sport hunting likely occur but are difficult to enforce/prevent. Escaped domestics (pets and livestock) are also evidently common.

Oklahoma – On local level, some intensive control efforts have been effective. On a statewide basis, control has been ineffective; populations are increasing and dispersing.

South Carolina – Efforts are generally not keeping up with population expansion.

Tennessee –Coordinated efforts with Wildlife Services or state agency staff have proven most effective. Dogs are negligibly effective at killing and redistribute pigs into unoccupied properties.

Texas – Ineffective; populations are increasing and dispersing.

Virginia – Several of the smaller populations are greatly reduced, with one population having not sighted pigs for approximately one year. Other populations have been reduced but still exist on the landscape. Access to private land remains one of the largest impediments to success.

West Virginia – USDA WS control efforts (trapping/shooting) have been very effective. Public hunting of wild boar within the four-county management area has been very effective.

6. Has your agency made any recent advances in hog control?

Alabama – ADCNR personnel work with Auburn University, USDA WS and the Alabama Cooperative Extension System on feral hog research, and have increased fines substantially for illegal transportation violations.

Arkansas – Through Farm Bill funding USDA APHIS WS, NRCS, AGFC, and the Arkansas Department of Agriculture have been able to more effectively collaborate control efforts and effectively cover a large percentage of the state. The AGFC has also invested in a new style of continuous catch net trap (E.g. Pig Brig). The addition of these traps have allowed us to trap sounders in areas where there is no cellular service or in areas where we cannot transport our traditional corral traps.

Florida – No.

Georgia – No.

Kentucky – Yes, KDFWR continues to improve upon previous eradication efforts, utilizing a team approach with USDA Wildlife Services. This team approach has led to the removal of several localized wild pig

populations and the delisting from Level 3 to Level 2 per the National Feral Swine Damage Management Program. Aerial operations have expanded to new populations, further reducing pigs in these populations. However, illegal releases continue to threaten our progress.

Louisiana – Thru Farm Bill funding, USDA APHIS WS and NRCS have instituted control operations on 3 landscape level areas of Louisiana.

Mississippi – No.

Missouri – In 2017 The Missouri Feral Hog Elimination Partnership completed a statewide strategic plan for feral hog elimination in Missouri. That plan called for the addition of over 20 full time hog trappers. MDC fully funded the plan beginning in FY18. Through a cooperative agreement with USDA-WS those trappers are on the ground eliminating hogs. Currently between USDA-WS and the Department of Conservation there are around 40 staff working full time on feral hog elimination efforts and we are seeing a lot of success. The Missouri Feral Hog Elimination Partnership has developed Unified Incident Command Structure to direct activities for all partners.

North Carolina – The NC Feral Swine Task Force continues to coordinate public outreach to educate agricultural producers, hunters, and the general public about the harm caused by feral swine and recommended methods for reducing their populations (primarily corral trapping). This task force is currently working on recommendations for regulatory changes that could reduce incentives that perpetuate feral swine populations and illegal releases in the state.

Oklahoma – No.

South Carolina – Yes. The law restricting movement of hogs is about 3 years old and we have made substantial effort in this area.

Tennessee – TWRA has developed a system allowing us to monitor and trigger traps remotely from a website. USDA Wildlife Services is now conducting aerial gunning work on a regular basis.

Texas – Yes. TPWD, USDA-APHIS, and Animal Control Technologies Australia have collaborated on development of sodium nitrite toxicant and delivery systems which are registered with the Australian Pesticides and Veterinary Medicines Authority. Review of sodium nitrite toxicants for USA registry is ongoing with EPA.

Virginia – None at this time.

West Virginia – Trapping and night shooting. Panel traps are most effective.

7. Any changes to control efforts in the future?

Alabama – Changes to control efforts on public lands have become a priority and part of the comprehensive management plan, in regard to removing non-native invasive species, but will be based on funding resources and trained staff. Public outreach events are scheduled to equip landowners with the tools and knowledge they need to successfully trap and remove hogs. Improved communications with the hunting community has improved reporting of violations of illegal feral pig transport. ADCNR significantly increased penalties for convicted transporters. Hunting at night is included in legal methods.

Arkansas – The Arkansas Game and Fish Commission intends to continue to intensify trapping and other control efforts on public and private land, and to develop partnerships with other agencies for collaborative efforts, education, outreach and technical assistance. We continue to collaborate with partners and plan to utilize USDA

aerial gunning programs

Florida – Continue to expand public hunting opportunities and empower other land-management agencies and the private sector to control wild hogs on lands they manage.

Georgia – Not at this time.

Kentucky – KDFWR plans to utilize pig trapping/surveillance teams in conjunction with aerial operations. Since it is difficult to impact population changes without adequate personnel, plans are underway to temporarily provide additional personnel to key areas to increase trapping efforts. Additionally, the Department is increasing media communications in preparation of a statewide wild pig hunting ban.

Louisiana – No

Mississippi – Unknown at this time.

Missouri – We intend to continue working with the members of the Missouri Feral Hog Elimination Partnership under an Incident Command Structure to implement intensive efforts to eliminate feral hogs from Missouri. We will also continue to work closely with private landowners.

North Carolina – The NC Feral Swine Task Force is exploring regulatory options that could reduce incentives for perpetuating feral swine on the landscape. The task force is also working to expand outreach efforts that discourage hunting as a tool for managing feral swine and provide expanded capacity for effective population control.
Oklahoma – No.

South Carolina – No.

Tennessee – Continue trapping and utilizing USDA Wildlife Service's aerial gunning program.

Texas – TPWD has made a significant investment, along with its partners, to direct manpower, materials and facilities to evaluate new methods of control that are more cost-effective than traditional methods. Currently, the scope of research is evaluating potential risk to non-targets from toxic baits.

Virginia – Staff is working to develop a comprehensive feral hog control plan and once that plan is developed and implemented, some changes will be required to meet objectives of the plan. DGIF has also contracted with USDA-WS to provide additional funding for the feral swine control efforts within Virginia.

West Virginia – No.

8. What is the total amount of money spent by your agency on hog control (separate direct outlays and personnel costs)?

Alabama – ADCNR had no dedicated funding for control efforts and specific funds are not attainable.

Arkansas – Approximately $500,000, the majority of which is for salary, trapping equipment and supplies for use on public and private property.

Florida – No dedicated FWC funding for hog control. Wildlife biologists assigned to wildlife assistance, private lands assistance and public hunting areas positions provide some technical advice regarding wild hog control. A rough estimate of personnel costs: $20,000. Cooperative public land management agencies do

contract trapping services but total cost has not been measured.

Georgia –We do not have an estimate specifically for hog control.

Kentucky – Minimum annual expenditures (personnel, supplies, contracts): $30,000.

Louisiana – LDWF has no dedicated funding for feral hog control. LDWF spent $325,000 for feral hog control and research in FY23.

Mississippi – FY 2015 Commodities: $8,409. Personnel: $6,847 has been spent for wild hog control on state-owned WMAs, specifically. Expenditures continue at similar rates each year and have increased with purchase of multiple "Smart traps" for use on WMAs.

Missouri – Approximately $2.2 million for labor by MDC staff and approximately $3.5 million on equipment and other expenses.

North Carolina – The NC Wildlife Resources Commission does not have dedicated funding for feral swine control.

Oklahoma – Public land: We do not have an estimate for annual wild hog control funding; the total amount is very low. Private land: Unknown small amount of funding spent on issuing landowner permits.

South Carolina – No estimate.

Tennessee – TWRA spent approximately $230,000 during FY 2023 to support its wild hog control program.

Texas – Research Salaries: $166,000, Travel and Equipment: $47,000Authorization of landowner permits: $17,000.

Virginia – DGIF has budgeted $60, 000 for FY 2021 for feral hog related management activities. We do not have an estimate for personnel cost at this time.

West Virginia – WVDNR does not have dedicated hog control funding. Costs during 2022 consisted of $250 for damage investigations (i.e. personnel costs).

Section Summary and Recommendations

The goals for managing wild hog populations vary greatly among WHWG member states. Some states specify "eradication", while others seek to perpetuate hogs with the "European genetic strain" to provide opportunity for hunters. State agency control efforts generally focus on public land, with technical guidance provided to private landowners. However, some states do provide substantial field assistance to private landowners. Few states have a single biologist dedicated to coordination of their wild hog management program. Coordination of wild hog control efforts is generally addressed at regional levels, and those regional staff conduct the control efforts often with assistance from USDA Wildlife Services biologists. Control efforts on public land are effective for a short term and examples of long-term results are scarce. Advances in control techniques are limited, although intensive efforts utilizing multiple methods such as aerial gunning, trapping, and shooting are reportedly successful on isolated, yet large, wild hog populations. Continued research investigating toxic baits and swine-specific delivery systems is considered a priority. Monetary expenditures vary greatly among WHWG member states. Agencies with intensive control programs face substantial financial commitments that may not be sustainable in the future.

The WHWG recommends that state game and fish agencies adopt a management goal of wild hog eradication in feasible locations. Furthermore, any state with isolated wild hog populations should implement aggressive control efforts, live transport prohibitions, and consider prohibiting hunting to rapidly arrest population growth and expansion. The WHWG additionally recommends that state game and fish agencies obtain or provide funds for research into economical, efficacious control methods and investigation of the cultural and social dynamics of wild hog hunting.

Section G: Educational Efforts

1. Describe your educational efforts and summarize their effectiveness.

Alabama – ADCNR has worked with the Alabama Cooperative Extension, the Alabama State Vet, as well as USDA Wildlife Services' personnel to host four-eight feral hog seminars across the state annually to address biology, ecology, disease, damage and control of feral hogs in Alabama. These seminars include PowerPoint presentations as well as onsite trap construction and trap-door demonstrations. These seminars have been well received and have been very popular with landowners facing feral hog conflicts. Technical assistance biologists continue to disseminate the same message when visiting private landowners.

Arkansas – About a dozen seminars are given by AGFC or other agency personnel throughout the state each year. These workshops are very effective at providing attendees with additional knowledge necessary to conduct hog control. We also assist University of Arkansas Cooperative Extension, Arkansas Association of Conservation Districts and Farm Bureau with workshops, demonstrations and policy development as needed. Monthly articles are distributed in AGFC newsletters and information is also included on-line. Radio and television media are used to a lesser extent and effectiveness is unknown.

Florida – The FWC works collaboratively with the University of Florida and county agriculture extension agents to provide online and printed information on wild hog management and wild hog diseases of importance to humans and domestic animals. Extension agents indicate outreach efforts are effective and ongoing. Online and printed outreach tools have been improved. Informational services to customers is also provided by FWC Wildlife Assistance Biologists and subject matter experts.

Georgia – We give technical guidance on hog management to landowners/managers, have a management guide, several multi-agency hog control workshops annually, and several articles on our website. Effectiveness could be considered moderate.

Kentucky – KDFWR launched a statewide media campaign in 2019 to encourage the public to report wild pig sightings and refrain from hunting or shooting wild pigs. This included the creation of educational brochures, updating the wild pig website, and video messaging. Prior to this, a countywide campaign aided in the eradication of the largest population of wild pigs in KY. In addition, recent developments have resulted in the acceptance and successful use of aerial operations as an eradication method in several new areas.

Louisiana – Public seminars are held in various regions of the state; magazine articles are written on the subject and hunter educators are educated about feral hogs. Newspapers, radio and TV have had numerous articles within the past year.

Mississippi – Our agency has cooperated with the Mississippi State University Extension Service in numerous wild hog management workshops, which are focused on private landowners. Participation is moderate at best. There are multiple public workshops conducted annually. Typically, provide 3-4 workshops statewide each

year. MSU Extension Service provides an abundance of resources via internet at www.wildpiginfo.msstate.edu/, with more than 1,321,908 page views to date. Topics include history, biology, disease issues, regulations, damage prevention and control. MSU Extension has also produced a publication for landowners, "A Landowner's Guide for Wild Pig Management – Practical Methods for Wild Pig Control" provided in hard copy and via internet download (over 100K downloads to date). A collaborative effort by Mississippi Dept. of Wildlife, Fisheries, and Parks, Mississippi Dept. of Agriculture and Commerce, USDA Aphis, and MSU Extension has produced a public education campaign about wild hog issues in Mississippi. To date, educational brochures have been delivered to 150 locations in 81 (of 82) counties. Materials are designed to target landowners and hunters and materials are primarily placed at feed/seed supply stores and sporting goods store locations.

Missouri – The MDC maintains a feral hog page on its website. We have an educational exotic species fact sheet about feral hogs. We have table-top displays with a panel describing the concerns of feral hogs and our position as an agency. We have a full-body mount and display of a feral hog to accompany the table-top display or to serve as a stand-alone exhibit. We provide news stories to media outlets when requested. We put feral hog information in our monthly magazine on occasion. I believe our consistent message has been effective in informing the public about the perils of feral hogs and the need to eliminate them from Missouri.

North Carolina – NCWRC and partners continue to provide technical guidance on feral swine control options and their relative effectiveness. Efforts to educate the public about the multi-faceted threats posed by free-ranging feral swine are ongoing and include a dedicated website (www.ncferalswine.org), other online resources, educational videos, magazine articles, media interviews with biologists, presentations and webinars. Efforts to discourage sport hunting is hampered by regulations that allow feral swine hunting year-round and at night - a rare allowance for huntable species in the state

Oklahoma – Oklahoma feral hog educational efforts are conducted by the Noble Research Institute, Oklahoma State University Extension Service, ODA and the Oklahoma Department of Wildlife Conservation. Efforts include publications, websites and onsite technical assistance, all detailing the biology, history and damage caused by and control methods for the feral hog. The resources are a very effective source of information for the public.

South Carolina – The SC Wild Hog Task Force has been organized, and we have education material and a website. Conduct numerous "Hog Management Workshops" collaboratively with Clemson University Extension and USDA-WS.

Tennessee – We have developed a partnership to tackle this issue. Partnering groups include hunting, conservation, agriculture and human health organizations. Outreach efforts by our partners have been more effective than TWRA's efforts. Our wild hog partnership produced a short education video being used to better inform the public about wild hogs. Additionally, partners are conducting field demonstrations on proper trapping techniques.

Texas – WMA staff provide technical guidance to landowners through field days, seminars, etc. TPWD has a website with information about ecology, biology, and control methods. Our technical-guidance biologists meet with landowners regularly (as stated above) and provide info related to landowner goals for the property. Using population growth and dispersal as a measure, our efforts facilitate pig control, but they have not been effective in halting population growth or dispersal.

Virginia – Previous work with educational programs have been fairly successful and we have started working to develop a robust stakeholders group and state Task Force made up of state and federal government partners. We are continuing to reach out to constituent groups throughout VA in hopes of pushing more robust control efforts.

West Virginia – WVDNR personnel provide public education to hunters during the wild boar hunting seasons while conducting hunter field surveys. Personnel distribute USDA pamphlets to hunters and landowners within the wild boar management area.

Section Summary and Recommendations

The WHWG member states provide a variety of educational efforts utilizing website content, media interviews, press releases, seminars, and publications. Partnerships have been developed with other agencies such as USDA Wildlife Services, state extension agencies, and universities.

The WHWG recommends that state game and fish agencies work collaboratively with multiple state and federal partners to disseminate accurate and consistent information on wild hog issues. The WHWG will begin working to produce hog management information in addition to this State Summary Report for distribution.

Section H: Emerging Issues, Research and General Comments.

1. Does your state have any emerging feral hog issues?

Alabama – New isolated populations in areas without past hog populations are the only current emerging issues, along with stopping the illegal transport of live feral hogs.

Arkansas – Increased human/hog interactions on public property and the dramatic increase in sport hunting popularity in novel locations where no populations previously existed. Opposition to the Arkansas Game and Fish Commission control approach and regulation changes restricting the opportunistic take of feral hogs.

Florida – Recent requests to allow private-sector shooting from helicopters for hog control. Solicitation from Scimetrics and the USDA WS to register proprietary wild hog toxicants for use in Florida is expected beginning in 2023.

Georgia – We do not have good data on population changes, only distribution. Anecdotally, populations seem to be increasing in some areas.

Kentucky – Yes. The release and abandonment of pot-bellied and domestic pigs is escalating throughout the state. In addition, wild pigs are showing up in new areas, partially due to new releases and possibly also due to better communication by the Department to request that the public report sightings.

Louisiana – Illegal release of transported hogs is a monumental concern and apparently is commonplace. Additionally, feral hog/human interaction has escalated.

Mississippi – No.

Missouri – No.

North Carolina – North Carolina is one of the largest pork producing states in the country. As such, the risk of African Swine Fever is of great concern. The NC Feral Swine Task Force is exploring opportunities to conduct research on reducing the disease threats feral swine pose to domestic pork.

Oklahoma – No.

South Carolina – Need to prevent further spread by controlling existing populations and preventing people

from moving/releasing hogs.

Tennessee – Continued opposition to our new management approach.

Texas – TPWD collaborated with USDA in EPA permitted free-range evaluations of sodium nitrite toxicants Texas (2023).

Virginia – We have been working to develop a cohesive stakeholders group that pulls together all of the potentially affected stakeholders to educate and inform on this issue. We have also begun development of a smaller more focused Task Force made up of state and federal partners to work cooperatively to specifically target areas of needed attention through policy, regulatory, or any other change needed to improve our ability to combat feral hogs. We are continuing to work cooperatively with USDA-WS on control efforts will provide assistance to the effort where we can. New sightings have been coming in slowly and we are attempting to address each sighting when feasible.

West Virginia – According to USDA WS, the feral swine population has decreased significantly, resulting in a fragmented population of less than 500 animals. However, potbelly pigs have become more common within feral swine investigations. Swine escaping from high fence hunting facilities continue to be an issue.

2. Does your agency perform any feral hog research? Results of research?

Alabama – Recent feral hog research projects investigated the use of continuous catch trap doors and the pressure sensitivity of feral hogs. Results of the continuous catch door study showed that only a small percentage of feral hogs used continuous catch doors to push into traps after the door had fallen. This year's study of pressure sensitivity has concluded and the data is being reviewed. Current research at Auburn University on home range and territoriality, in conjunction with whole sounder removal is ongoing.

Arkansas – Not at this time. Discussions have been initiated with local universities to discuss the possibility of a population density study on two WMAs using removal data. These data could potentially better inform managers as to how effective current removal strategies are over the long term.

Florida – The FWC has done feral hog research and these results have been published in peer-reviewed journals. No current FWC research is taking place during 2020. A Virginia Tech graduate student research project is being conducted in South Florida – objectives include investigation of wild hog and coyote space use, survival, and causes of mortality on a landscape mosaic shared with the sympatric Florida panther population. The University of Florida IFAS/Extension faculty in Ona also conducts research on wild hog damage and survey methodology.

Georgia – No. However, the Beasley Wildlife Lab at the University of Georgia is currently conducting multiple wild hog projects at the Savannah River Site.

Kentucky – No.

Louisiana – Yes. We conduct serological surveillance for swine brucellosis and pseudorabies as well as other diseases. Also, LDWF partially funds and assists the LSU AgCenter with their feral hog toxicant research.

Mississippi – Robert Clay Hayes' master's thesis, "Feral Hogs in Central Mississippi: Home Range, Habitat Use and Survival" (May, 2007), examined home range, habitat use and survival of 29 feral hogs in central Mississippi using radio telemetry. During the dry season (April 1-Oct. 31, 2005), densely vegetated habitats were very important in home-range placement (second-order selection), with selection favoring seasonally

flooded old fields, followed by old fields and managed openings. During the wet season (Nov. 1, 2005-March 31, 2006), old fields were still preferred, followed by agricultural fields, but flooded old fields were not preferred. For habitat selection within the home range (third-order selection), hogs preferred old fields and managed openings during the dry season. All habitats were used randomly within home ranges during the wet season. Dry and wet season survival rates were 80.8 percent and 41.4 percent, respectively. Hunting was the major cause of mortality (80? 100%). Seasonal differences in habitat selection may have been caused by flooding of preferred habitats, food availability and hunting. The MDWFP has cooperated with numerous MSU graduate projects in 2017-18. These studies have examined habitat selection, movement, range, and agricultural damage. Results are pending.

Missouri – We are working with the USDA staff at the National Wildlife Research Center on a number of research projects.

North Carolina – Not at this time, though there is potential for one or more graduate research projects focusing on feral swine disease risk, distribution, and movement. Discussions around project goals and deliverables are occurring between NCWRC, NC Department of Agriculture, and NC State University.

Oklahoma – No.

South Carolina – Not at this time.

Tennessee – No ongoing research projects at this time

Texas – Research and development of a safe and reliable toxicant for registry with the EPA. Captive and free-range investigations of feral pig biology for the purpose of enhancing control and reducing damage. Two manuscripts are in press and will be published in 2023.

Virginia – There has been little research on feral pigs within the last five years. Most recently there was a study of the pig population at Back Bay National Wildlife Refuge.

West Virginia – No.

3. Please list any comments that your agency may have.

Alabama – The ADCNR is taking proactive measures to better address feral hog issues in the State, not only through the active control measures on agency managed lands but also through technical assistance provided to private land owners, continued research, and significant increases in violation penalties related to illegal transportation and release. A Wild Hog Task Force has also been developed, with representation from all areas of research, regulation, and enforcement to address issues specific to Alabama. Participation in the SEWHWG provides a valuable avenue for the stakeholders to continue cooperative efforts regarding the spread of feral hogs.

Arkansas. The Arkansas Game and Fish Commission continues to view feral hog control and management as a priority and is collaborating with other agencies to develop and implement effective tools for both public and private property. We echo other states WHWG representatives' recommendations and promote partnerships aimed to reduce all incentive for transport and perpetuation of hog populations while strengthening regulatory measures. Arkansas continues to pursue the development of an inter-agency task force to increase public awareness and strengthen regulatory processes to aid in feral hog control measures. We appreciate both USDA APHIS WS and University of Arkansas Cooperative Extension for providing comments to this summary.

Florida – The wild hog is often considered one of the more problematic wild animals in Florida, and there are different viewpoints. Some people like and value them; some do not. Many Floridians value wild hogs for the hunting opportunity and related revenue generation they provide. These animals can be destructive to native habitats, wildlife and agriculture, and many people would like to see them extirpated. Like many wild animals, wild hogs also can carry diseases that may be spread to humans, domestic animals and wildlife. In Florida, wild hogs also serve as a major prey item for the endangered Florida panther, and harvest is regulated in panther range. The different values attributed to wild hogs in Florida provide policy makers and land managers with challenges when setting management goals. In an effort to tackle these challenges and to better coordinate feral hog policy, research, outreach, control, hunting and other stakeholder services between agency/NGO partners, the FWC, UF/IFAS Extension, and USDA/APHIS Wildlife Services created an inter-agency Florida Feral Hog Working Group in 2018. Wild hog management, policy and research professionals use this working group as a communication forum to create outreach products and advance wild hog projects.

Georgia – Our primary focus has been to close loopholes for unlawful releases and put some teeth into enforcement. Secondly, we have focused a lot of education effort on whole-sounder trapping.

Kentucky- Kentucky received guidance from Missouri Department of Conservation per the launch of a media campaign encouraging the public to report, rather than shoot wild pigs. Wild pig hunting information, previously found in the KY hunting guide, has been removed and replaced with a message encouraging the public to report wild pig sightings and refrain from hunting or shooting wild pigs, to align with KDFWR's media campaign. The Commission will consider a prohibition on wild pig sport hunting as a means of halting illegal releases in September by working with the KY Wild Pig Eradication Task Force, KDFWR District Commissioners, and partners.

Louisiana – Efforts need to be pushed along to speed up the release of feral hog toxicants and more research needs to be done on biological control methods including swine-specific contraceptives.

Mississippi – The MDWFP has recognized control of wild hogs on agency-owned properties as a priority. The MDWFP is allocating resources and personnel to proactively take measures to reduce wild hog populations on state-owned WMAs via baited corral traps and killing. The MDWFP is taking a stance that the opportunity to harvest hogs on public property is not for sporting purposes and will not promote hog hunting, but will provide hunters the opportunity to kill wild hogs on public property incidental to any legal open hunting season with weapons and ammunition legal for any such hunting season. In October 2015, the MDWFP hired a full time Nuisance Wildlife Biologist to work primarily with developing a Wild Hog Program and Management Plan

Missouri – MDC position: Promote the elimination of feral hogs from Missouri. Feral hogs are not wildlife and not under the direct control of MDC. Feral hogs are bad for Missouri and our natural resources. MDC will work cooperatively with the Missouri Feral Hog Elimination Partnership to eliminate feral hogs from the landscape. MDC is committed to eliminating feral hogs from the state.

North Carolina – Efforts to reduce feral swine populations are complicated by the ongoing popularity of sport hunting for pigs, which incentivizes landowners to manage sustained or increased feral swine populations. Our immediate goals are to educate the public, especially hunters, of the severity of harm caused by free-ranging feral swine, and to reduce incentives for or even prohibit sport hunting feral swine in North Carolina. At this point, more education is needed to gain support from the public and lawmakers to achieve this. As encouraging as the ongoing research on toxicants may be, they will be unusable in North Carolina if a delivery system is not designed that can prevent access by black bears.

Tennessee- TWRA recommends building a diverse partnership to focus on eliminating incentives for wild hogs to be translocated, performing educational outreach, and creating effective wild hog control regulations for

landowners. The success of a program largely depends on support from the Department of AG in state. States with split authority regarding wild hogs are especially challenged since political environments for wildlife and AG agencies differ.

Texas – TPWD believes that it is not the appropriate agency to have authority and responsibility for pig control efforts in Texas. Our efforts are to be focused on technical guidance, research, and demonstration, with regard to feral pigs. Increases in population, range and related damage continue to increase. The current suite of management techniques and information dissemination, though necessary, is insufficient to halt or reduce the negative impacts at the state level. The threats to human health, private and public property, and livestock markets, though not fully understood, are already unacceptable. Reduction of these negative impacts and the costs of control are imperative. TPWD considers the development of a safe and effective toxicant and delivery system as one of the most viable means of mitigating damage and costs of control. We believe that research efforts should be directed at developing more efficient means of control. This is exemplified in the efforts of our staff at Kerr Wildlife Management Area (and the agency's encumbrance of indirect costs for supporting the effort). We encourage all state wildlife management agencies to be proactive in their efforts to manage the feral pig. Since Texas is 97 percent private land, our impact is largely through technical guidance to private landowners.

Virginia- Virginia is building off of the early successes of the feral hog program and we are moving forward towards a policy of eradication. Recent policy fixes have clarified legal concerns to some extent and we have additional opportunities to work cooperatively with stakeholders in the future. The stakeholders are keenly aware of the potential impacts and are continuing to partner with our efforts. We are working towards solidifying a Feral Hog Control Plan and we are analyzing our next steps in the effort. We are not trying to invent the wheel, rather take what we have learned through other states with similar and worse problems and adapt the solutions for a Virginia specific solution.

West Virginia- WVDNR participates in the West Virginia Feral Swine Working Group. Other participants include West Virginia University Extension Service, WVDOA and USDA WS. The coordinated efforts of this group will enhance the state-wide feral swine sighting and damage reporting system, sponsor legislation to advance feral swine control as needed, and advance distribution of information regarding feral swine damage.

Section Summary and Recommendations

Emerging wild hog issues include reports of new isolated populations, overall population growth, increased wild hog/human conflicts and progress towards the use of toxic feral hog baits. Additionally, some states are facing regulatory issues involving aerial gunning, live transport, restricting wild hog hunting on public land, and hunter satisfaction with wild hog regulations. Internal and interagency committees are being developed to develop and initiate policy discussions related to wild hogs. Multiple WHWG member states reported wild hog research projects in their state. Research topics included movement, survival, trapping techniques, population monitoring, disease monitoring, general hog biology, and toxicants.

The WHWG recommends that state game and fish agencies promote and encourage research for economical, efficacious control methods and investigation of the cultural and social dynamics of wild hog hunting and illegal translocations. The WHWG will investigate potential sources of funds for use in research projects that address management priorities. This shall include the proposal for a SEAFWA-funded project for the Wildlife Management Institute to develop and implement a program for testing and certification of wild hog toxicant feeders as bear-proof.

Appendix A: SEAFWA Letter of Support for the 2018 Farm Bill Feral Swine Eradication and Control Pilot Program

SOUTHEASTERN
ASSOCIATION OF FISH AND WILDLIFE AGENCIES

August 28, 2018

Dear Members of the 2018 Farm Bill Conference Committee:

As President of the Southeastern Association of Fish and Wildlife Agencies (SEAFWA), I am writing to communicate the importance of, and our support for including the Feral Swine Eradication and Control (FSEC) Pilot Program in the Conservation Title of the 2018 Farm Bill. The SEAFWA is the professional association that serves as the collective voice of state fish and wildlife agencies that possess the constitutional and/or statutory authority and responsibility for the conservation of fish and wildlife species within their borders, within the southeastern United States. The fifteen SEAFWA member states include: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

The feral hog (Sus scrofa) – a wild relative of domestic swine – is not native to North America and threatens native wildlife, natural resources, agriculture, private property and public health wherever it occurs. This invasive species reproduces quickly (2 litters each year) and is rapidly expanding its range in the United States. The population size exceeds 6 million and feral hogs now occur in at least 35 states. Feral hogs thrive in the warm climates of the southeastern states where they compete with wildlife for food and prey upon the young and nests of native wildlife. These negative impacts to wildlife can be significant (e.g., sea turtle nest depredation) and often require costly long-term efforts to exclude or control feral hogs in sensitive conservation areas. Also, when wallowing and rooting (digging) for food, they disturb large areas of soil, producing tremendous damage to public conservation lands, agricultural crops and private property. These impacts and related damage management costs add up to approximately $2.5 billion in damages each year. Feral hogs can be aggressive towards people and may transmit many of the dozens of diseases they carry to wildlife, livestock and people. Accordingly, the SEAFWA strongly supports the FSEC Pilot Program as a relevant conservation measure and contribution to feral hog population control efforts.

The five-year FSEC Pilot Program is proposed to provide $100 million of feral hog control funding to the U.S. Department of Agriculture's Natural Resources Conservation Service and Animal and Plant Health Inspection Service. Both agencies have a long and successful history of collaboration with state fish and wildlife agencies to provide feral hog control services to agricultural industry stakeholders, conservation land managers and private property owners. The FSEC Pilot Program will help expand these much-needed efforts.

The SEAFWA acknowledges the conservation and agricultural industry value of the Feral Swine Eradication and Control Pilot Program and we encourage the Farm Bill Conference Committee to include it within the Conservation Title of the final 2018 Farm Bill.

Respectfully,

Charles F. Sykes
President

CFS:wm

cc: Virgil Moore, President, Association of Fish & Wildlife Agencies
John Bowers, Chairman, SEAFWA Wildlife Resources Committee
Curtis Hopkins, Executive Secretary, Southeastern Assoc. of Fish & Wildlife Agencies

THE WILDLIFE SOCIETY
Leaders in Wildlife Science, Management and Conservation

Final Position Statement Invasive Species

Invasive species present unique challenges for wildlife management. The Wildlife Society defines an invasive species as a plant or animal species (including feral species) that is nonnative, whose introduction to a novel area was facilitated by humans, and that causes or is likely to cause ecological or economic harm.

Humans intentionally and unintentionally facilitate the spread of species to areas outside of their native ecosystems around the world. Wildlife species are purposefully released to enhance hunting, fishing, and wildlife viewing opportunities. Wildlife are also imported for the pet industry, and pets are sometimes released or escape into novel ecosystems. Plant species have been intentionally introduced as ornamentals, as pasture for livestock, and for erosion prevention. Humans also unintentionally spread species via shipments of cargo, as hitchhikers on outdoor recreational gear, vehicles and watercraft, and as stowaways in the ballast water of large ships. Most species moved by these pathways do not become invasive, but those that do can have serious negative effects.

Impacts by invasive species vary widely depending on the species and ecosystem(s) involved, and include negative effects on biological diversity, ecosystem productivity, environmental integrity, wildlife health and human health, property, safety, and culture. Invasive species can negatively affect native species through direct competition and predation, habitat alteration and degradation, and disease transmission. Additionally, invasive species cause significant economic harm to society, for example, by influencing agricultural production, water treatment efforts, and recreational opportunities.

Cumulative effects of invasive species are substantial and can be difficult and expensive to remedy. After control or removal of invasive species, recovery of native ecosystems will take time and may require management actions, depending on the type, intensity, and duration of the disturbance.

Considering the above, the policy of The Wildlife Society regarding invasive species is to:

1. Oppose the introduction or maintenance of invasive species to maintain native biological diversity, and to support ecosystem integrity, resilience, and function.

2. Encourage the enactment, implementation, and enforcement of laws and regulations focused on preventing introduction, controlling spread, and eradicating invasive species.

3. Encourage land and resource management agencies to prioritize management for native wildlife and plants and encourage the removal of invasive species on public or private lands.
4. Critically evaluate and consider the potential effects (positive and negative) of intentional movement of plants and animals for reasons such as imperiled species' management, as biological control agents, and for other conservation strategies.

5. Encourage programs to monitor and evaluate current and potential invasive species to inform and target future management strategies, especially prioritizing those that include the key elements of prevention, early detection, rapid response, containment of spread, and eradication where possible.

6. Support the sharing of technical data and encourage cooperation among agencies and other partners to improve efforts to control and eradicate invasive species.

7. Support cost-effective control and eradication programs for invasive species that exhibit timely results without sustaining or causing long-term ecological harm. Encourage governing agencies, including tribal entities, in their efforts to strategically prioritize species and sites based on an assessment of ongoing and potential threats, opportunities to engage, and expectation of positive results.

8. Encourage and support increased funding for scientific research and education to control, minimize, or eradicate invasive species and their negative impacts.

Approved by Council June 2021. Expires June 2026.

THE WILDLIFE SOCIETY

FACT SHEET

Feral Swine: Impacts of Invasive Species

Trapping, shooting, installing barriers, and modifying habitats are methods used by agencies to reduce damage by feral swine. (Credit: USDA-APHIS)

Truly wild swine are native only to Europe and Asia.[1] Domestic swine have been bred for agriculture and other purposes throughout North America. The intentional release and/or escape of these domesticated swine have led to established populations of feral swine (*Sus scrofa*). The release of swine has been common in recent years to establish populations for hunting, most frequently in the southeastern United States.[1]

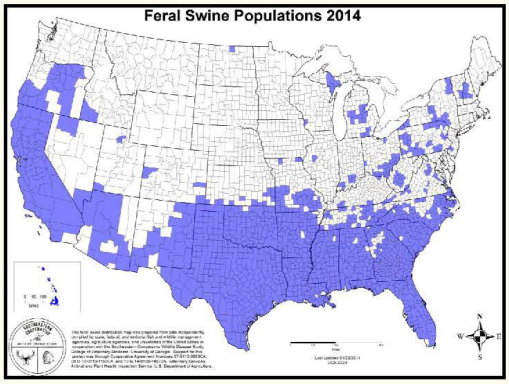
The feral swine population currently exceeds an estimated 5 million in the United States.[2] Control of feral swine populations is critical to natural resource management.

What are the economic impacts of feral swine?

Economic losses resulting from feral swine damage is estimated at greater than **$1.5 billion per year in the U.S.**[2] Feral swine damage property, agriculture, and natural resources by their aggressive rooting of soil in addition to their trampling and consumption of crops as part of their daily search of food.[1,5]

Feral swine have huge impacts on many natural communities. Feral swine are extreme habitat generalists and one the greatest vertebrate modifiers of natural plant communities,[4] feeding on plants and animals and changing food preference based on availability.[1] Wallowing activities may reduce water quality and disrupt sensitive wetland ecosystems.[6] Other documented damage includes predation on young livestock, ground nesting birds, amphibians, reptiles, and other wildlife.[5]

Feral swine are prolific breeders. In productive habitats, female pigs can begin breeding as juveniles.[3] Most sows produce a single litter annually, but are physiologically capable of reproducing twice a year. Typical litter sizes range from 5 to 6 piglets, but can potentially be greater than 10. In the absence of control efforts, local populations can triple in a single year.[1]



Feral swine distribution map in the U.S. (Credit: Southern Cooperative Wildlife Diseases Study 2014)

Which agencies manage feral swine populations?

Agencies responsible for feral swine management include federal agencies such as Wildlife Services within the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), and state and provincial Departments of Agriculture, Fish and Game, and Natural Resources. Non-governmental agencies, like the Southeastern Cooperative Wildlife Diseases Study program may also complement state and federal efforts in feral swine management.

Feral Swine carry diseases that can impact wildlife and livestock. Feral swine can carry at least 30 important viral and bacterial diseases, such as leptospirosis, salmonellosis, and brucellosis and at least 37 parasites that affect people, pets, livestock, or wildlife.[7]

Feral swine can be particularly devastating to the livestock industry within the United States. Large, widely distributed populations of feral swine jeopardize ongoing efforts to control a number of livestock diseases such as pseudo-rabies and the considerable financial investments that support those efforts.

The most serious potential disease threat from feral swine is the reemergence of foot-and-mouth disease (FMD), which was last detected in the U.S. in 1929[8] and in Canada in 1952.[9]

Feral swine can cause airborne transmission of FMD at rates much higher than cattle and sheep.[8] A FMD outbreak could cripple the U.S. and Canadian pork industry and would likely have negative impacts on wild ungulate species.

Widespread disease outbreak has the potential to impact landowners, outdoor recreationists, and natural resources agencies. Strict quarantine necessary for disease control could prevent access to lands for hunting, wildlife viewing, and other activities.[8]

Feral swine can be difficult to control. Feral swine are managed as game species in some states, while other states have little or no regulations concerning their control and eradication. Variability in regulations across political boundaries can complicate management efforts.

Where feral swine are well established, multiple methods of control are needed to reduce or eradicate feral swine populations. The most widely accepted methods for control and elimination include trapping, snaring, shooting, use of trained dogs, and aerial gunning.[1]

Feral swine impose their greatest threat in areas where their presence is a relatively new phenomenon. New populations are often the result of illegal releases of swine for the purpose of increasing hunting opportunities.[1]

Delayed implementation of control efforts for newly established populations of feral swine will result in the need for increased effort at higher cost and/or more years needed to achieve elimination.

Feral swine cause direct and indirect economic losses to agriculture. Direct damage to crops by feral swine is estimated at over $800 million in the U.S. annually (Credit: USDA-APHIS)

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Appendix D: Latest USDA APHIS National Feral Swine Map