The Midwest Association of Fish and Wildlife Agencies (MAFWA) established the Midwest Ad-hoc Feral Swine Committee (MFSC) in 2013. The purpose of the feral swine committee is to further MAFWA’s function of promoting the conservation and management of wildlife resources in the face of rapidly expanding feral swine populations which directly endanger those wildlife resources. The Committee is to collect and compare feral swine information among the member States and Provinces, and to provide management and policy recommendations to the Directors of MAFWA.

**MISSION:** Develop results-driven and science-based management actions to prevent the introduction and spread of feral swine and promote the eradication of existing populations of these animals in the Midwest.

**CHARGES:**
1) Develop management plans for feral swine based on sound scientific and proven methods.
2) Promote and encourage research on economically feasible and effective methods of feral swine control.
3) Encourage uniform polices on the translocation and interstate movement of feral swine.
4) Discuss the role of federal entities in the control of feral swine in the Midwest.
5) Encourage partnerships among states and between state and federal entities to unify the battle against the spread of feral swine.
6) Advise the MAFWA Directors on issues relating to feral swine policy, inform the Directors of committee actions and execute any directives given by them.

**Meeting Time and Place:** The MAFWA FSC meeting held a joint meeting with SEAFWA WHWG at the National Wild Pig Conference in Logan, Utah on April 20, 2023. Attendance was low, possibly due to this being the furthest west the conference has been held. In addition, some members could not get approval to travel.

**MAFWA FSC Members:** A list of members and representative states are included in Appendix 1.

**Executive Summary:** The MAFWA Feral Swine Committee annual report is summarily reduced to the respective State and Provincial reports submitted with the primary function of the MAFWA Feral Swine Committee being information and exchange network among states and provinces. The number of feral swine/wild pigs removed continues to increase in the more heavily wild pig populated states in the Midwest, with significant reductions in wild pig numbers and distributions in some Midwest states with lower pig numbers. Most of the work in the Midwest states is being conducted by USDA-APHIS-Wildlife Services through cooperative agreements with states as part of the National Feral Swine Damage Management Program (NFSDMP).

**Director Action Items: Charge 1:** Begin development of a broad Midwest feral swine management (eradication/reduction) plan based on sound scientific and proven methods. Discussions were recently held at the AFWA Feral Swine Working Group meeting on the feasibility of creating a national plan, rather than separate regional plans. This plan could be built of the results from WMI’s study, case
studies from individual states and USDA APHIS, information from One Health, and BMPs to start the process. This national plan would need to incorporate the differences in regions and states, state laws and policies, as well as the differences in severity of feral swine problems. There is a possibility of creating an Ad-hoc working group for this project. AFWA FSWG plans to have a deeper discussion about this at their fall meeting. They have asked our working groups to have some internal discussions and come back with ideas and input.

Charges 2-6 are being accomplished through continued networking among the Committee representatives, attendance at the International Wild Pig Conference (IWPC) and representative participation in the NWPTF that unfortunately put on temporary hold with the COVID-19 outbreak. Most states are participating in partnerships or agreements with USDA-APHIS-Wildlife Services as part of the National Feral Swine Damage Management Program (NFSDMP) funded under the 2014 and 2018 Farm Bills.

**Director Information Items:** The value of the information exchanged at the IWPC and NWPTF meetings and throughout the year is invaluable to keeping abreast of the rapidly evolving “state of the art and science’ of wild pig population control and hopefully, eventual elimination. The MFSC encourages providing support for representative attendance at both the IWPC and NWPTF meetings when possible, recognizing that participation of all MFSC representatives is beyond their primary or even secondary job responsibilities. The NWPTF website is now housed at The Berryman Institute at Utah State University and now handles organization and communications related to the NWPTF and IWPC’s.

**MAFWA Research Priorities:** MAFWA Feral Swine Committee members were tasked with developing science-based management priorities by the Science and Research Committee of the Association of Fish and Wildlife Agencies (AFWA). MAFWA FSC divided these priorities specifically by feral swine and other species of interest.

**AFWA Action:** AFWA decided to pursue Human Dimensions B-communication efforts to effectively communicate to sport hunting industry the negative effects of hunting feral swine. They created a first draft of a publication titled “Impacts of feral swine on popular game species in the United States” and tasked the National Wild Pig Task Force Policy sub-committee with providing comments by May 31, 2023.

**Management Priorities Specific to Feral Swine**

**Wildlife Health**

a. Disease transmission between feral swine and both native wildlife and livestock
b. Chronic Wasting Disease (CWD) -interspecies CWD infection: risks of feral swine contracting and spreading CWD
c. African Swine Fever
d. Pseudorabies
e. Swine Brucellosis

**Weather and Temperature-related Concerns**

a. Indirect and direct effects of climate change on feral swine populations

**Invasive Species**

a. Feral Swine
Emerging Technologies
a. Approval and use of feral swine toxicants and feeders
b. Improved trap technology
c. Accurate techniques to determine feral swine densities
d. Development of bait that attracts pigs without attracting non-target species, such as white-tailed
deer and turkey, whose baiting seasons often curtail wild pig trapping efforts

Inter-jurisdictional Cooperation
a. Collaborative nation-wide plan for feral swine eradication

Human Dimensions
a. Solutions to counter the release of unwanted pot-bellied pigs
b. Effectively communicate to sport hunting industry the negative effects of hunting feral swine
c. Solutions to eradicate feral swine in pig refuges where private landowners prohibit removal

MAFWA FSC Chair rotation
Alan Leary (Missouri) volunteered to chair the MAFWA Feral Swine Committee for the next two years. Our plans are to rotate chairs in alphabetic order by state every 2 years, similar to SEAFWA WHWG.

2022 State/Province Status Reports Submitted

Indiana – Submitted by Zachary Voyles

The last feral swine of Eurasian origin taken in Indiana occurred in 2021. No verified reports of feral swine of Eurasian origin have occurred since that time. Indiana USDA-APHIS-Wildlife Services continues to monitor for feral swine through onsite investigations from credible reports and helicopter surveys of past hot spots. Indiana also participated in novel detection methods including eDNA and detection dogs in 2022. eDNA has yielded positive hits for feral swine, however, it is believed the DNA is remnant. Detection dogs have proven useful in other settings for detecting feral swine, but dogs have had no positive hits for feral swine in Indiana. Provided no verified reports of feral swine occur between now and October 2023, Indiana will transition into a monitoring-only phase.

Iowa - Submitted by Jim Coffey

The responsibility of State Feral (Wild) Hog Coordinator falls under the Iowa Department of Natural Resources (IDNR) forest wildlife program. Jim Coffey is the contact person for the agency. This position is located out of the Chariton Research Station in Chariton Iowa 24570 US Hwy 34 Chariton Iowa (641-774-2958). The Iowa DNR remains the coordinating agency for feral hog incidents working with several other State and Federal agencies. USDA Wildlife Services will continue to take a lead role on eradication and disease testing of located animals. The Iowa DNR depredation team and local conservation officers along with the Iowa Department of Agriculture when needed.
The 2022 calendar year saw little activity in varying locations around the state. A total of 7 hogs were observed in four different reports. Each report came from a different county. These counties spread across the state with no indication of a pattern. Most live hogs were investigated and deemed to be escaped local animals. When owners were identified, they were informed of Iowa laws regarding domestic livestock captivity. All four reports were derived from the general public from personal encounters. Two of the reports were located on wildlife management areas. If able, reports were investigated for confirmation of location. No one area of the State shows a prevalence for sightings. There continues to be an increasing number of heritage breed hogs that are being raised in open pastures and pot-bellied (pet) animals in the State. Of the seven hogs reported 4 were killed with no location of the other three. The Iowa DNR did not kill any hogs during this year. Disease testing is coordinated through the USDA APHIS office and no disease was reported this year. We do plan on continuing with feral hog information in our DNR hunting regulations booklet for 2023-2024. Feral hogs continue to be a concern for wildlife management staff. The Iowa feral hog working group did not meet in 2022. Iowa Department of Agriculture has a new state veterinarian that is concerned about feral hogs and reached out for more communication between agencies as animals are detected.

Kansas - Submitted by Shane Hesting

USDA-APHIS-WS is finishing up the bulk of their feral swine control in Kansas at this time. Those numbers will soon be added to the totals.

USDA is holding the line in Kansas. I think the eradicated populations are now up to 13 or 14. Feral hogs still cross over from Oklahoma into Sumner County and east to Cherokee County. Additionally, feral hogs still have hooves on the ground from Cherokee County north to Miami County. Those border areas consistently get spillover from our neighboring states.

I heard sodium nitrite will be more widely used within 3 years, which would include use in Kansas.

Potbelly pigs have made the news several times in Kansas over the last couple months. It seems the potbellies were thinking feral swine were hogging all the media coverage. More reports of potbelly pigs have been received by KDWP and USDA this year than any other year.

Kentucky - Submitted by Terri Brunjes

The KY Wild Pig Eradication Task Force recently held a meeting to discuss the possibility of promoting a prohibition on wild pig hunting. The Task Force agreed that a prohibition on wild pig hunting was necessary to remove incentives for illegal release and allow for the best chance for complete eradication. This will be presented to the KY Fish and Wildlife Resources Commission at the next commission meeting as a Discussion Item. If it passes through, it will become an Action Item to be voted on at the following Commission meeting. The Discussion phase is a chance for the biologists to educate the public and commission on the issue.
Manitoba - Submitted by Janine Wilmot

In Manitoba, the Squeal on Pigs initiative continues to be delivered by the Manitoba Pork Council, with support from the federal and provincial governments. Reports of invasive swine presence and harvest in the province are directed to the Squeal on Pigs website, or toll free number, and these are verified and targeted for removal by project staff. Removal is primarily through corral trapping.

In the 2022 calendar year, Squeal on Pigs documented sightings of 127 and removal of 122 free-roaming swine in the province. Number removed includes both reported hunter harvest and Squeal on Pigs corral trapping efforts.

Michigan – Submitted by Dwayne Etter

Activity and Removal:
We continued to receive scattered reports of wild pigs throughout Michigan in 2022. This included a few continued reports in the vicinity of a decommissioned private hunting ranch in southcentral Michigan. In fall 2021, the United States Department of Agriculture-Wildlife Services (USDA) responded to reports and recorded photos of Russian boar or hybrids, a prohibited invasive species. In 2022, intense monitoring and removal efforts have continued in the area surrounding the hunting ranch where Russian Boar hybrids originally escaped. USDA removed 10 wild pigs from properties adjacent to the ranch and local residents killed an additional 4- 5 pigs. One additional wild pig was removed by USDA and 2 by local residents in northern Michigan in 2022. MDNR continues to maintain a voluntary online wild pig reporting system. Additionally, MDNR asks all hunters registering a harvested deer about feral pig sightings. Reports are forwarded to USDA for follow up.

Research:
There were no active research projects conducted by MDNR or Michigan USDA-WS in 2022. However, Michigan USDA-WS continues to provide samples to the National Wildlife Research Center’s genetics laboratory for ongoing research.

Minnesota – Submitted by Eric Nelson

In 2022, Minnesota is still feral swine free. We do have instances of escaped domestic swine “at large” that end up living in the wild. A total of 14 feral swine complaints in 8 different counties were investigated in 2022. Seven complaints were responded to with a site visit or multiple site visits. We continue to work with our Board of Animal Health on locating the owners and USDA-Wildlife Services on monitoring and removal if necessary.

Our main issue is still loose domestic swine not claimed by their owner. In one case a car hit and kill a swine at night that was never claimed by its owner. Our Conservation officers shot four swine living in the wild at one location. Other swine were seen at that same location but remain at large. A local sales barn worker admitted to having the swine near that location escaping and reported it to the local police department. During an investigation by a Department of Natural Resources Conservation Officer the sales barn owner said they had never had swine escape and the worker was incorrect.
USDA-Wildlife Services state director has informed us that since they have not removed any swine in Minnesota during the last two years our state will be moving from a detection status to an elimination status in October of 2023. They are hopeful to be able to access some emergency maintenance funding if our state were to need assistance in monitoring and removal after October 2023. Minnesota is reliant on USDA Wildlife Services to conduct all swine monitoring and removal activities. Our DNR Division of Fish and Wildlife is funded by license fees, so we do not have a funding mechanism to remove swine at large and living in the wild. An interagency feral swine committee composed of Department of Natural Resource, USDA-Wildlife Services and Board of Animal Health staff is still working on finishing up a feral swine response plan for the state with lessons learned from implementing our removal authority under state statute.

Missouri- Submitted by Alan Leary

The Missouri Department of Conservation’s (MDC) Commission again fully funded the $1.8 million Statewide Strategic Plan for Feral Hog Elimination in Missouri. The funding continues to go to a cooperative agreement with the US Department of Agriculture – Wildlife Services (WS) to employee full time feral hog technicians and purchase equipment for them as called for in the Plan. Other members of the Missouri Feral Hog Elimination Partnership (Partnership) have also made significant contributions to support elimination efforts in Missouri.

In 2022 the Partnership removed 6,289 feral hogs from the landscape. That is about 3,000 less than we removed in 2021 and about 6,000 less than we removed in 2020. This is because there are fewer hogs on the landscape and it is getting harder for the trappers to find hogs. For a comparison, we removed about the same number of feral hogs from the state in 2017 as we did in 2022. In 2017 there was not a single person working full time on trapping feral hogs in Missouri. In 2022 between USDA WS and the Missouri Department of Conservation we had about 45 full time hog trappers in Missouri.

One metric we use to monitor our progress is the number of watersheds occupied by feral hogs. In 2016 feral hogs occupied 459 watersheds in Missouri which covered 11,239,778 acres. At the end of 2022 feral hogs occupied 211 watersheds in Missouri which covered 4,28,378 acres. That is a reduction of about 6.3 million acres or 56% in just six years.

We continue to use systematic baiting to determine if hogs are present in an area. This is a very effective way to determine if hogs are present in an area.

We are also using unmanned aircraft system (UAS) or drones extensively. We use drones with Forward Looking Infrared cameras to assist with night shooting. In addition, we are using them to scout in front of the helicopter when doing aerial operations. This helps to maximize helicopter time.

We have hired four extension educators through the University of Missouri Extension Service. They talk with landowners and educate them about our efforts and talk with Farm Bureau Chapters, County Commissions, Soil and Water Districts, and any other groups or individuals they can to educate them about our efforts and increase support. They have been very effective. It is beneficial to have people that don’t work for the government spreading the word. Some people don’t like to work with the government.
We are still seeing evidence of intentional releases but much less than it was a few years ago.

**Nebraska – Submitted by Sam Wilson**

In 2003 the Nebraska State Legislature enacted statutes that prohibit pig hunting. Nebraska Game and Parks Commission regulations also prohibit the possession or release of wild pigs. These laws and regulations remove any incentive for people to own, move, or release feral pigs in the state. The Nebraska Game and Parks Commission is tasked with eliminating feral pigs upon their discovery. Eradication efforts have primarily taken place since 2004. Shooting from a helicopter – in cooperation with Wildlife Services – has proven to be the most successful method of eradication; although other methods such as trapping and shooting over bait are used. We believe the legal framework that removes incentives for people to own or release wild pigs has been the most important factor in allowing for the complete eradication of feral pigs in Nebraska. No feral pigs were removed during 2022 and there is no present research taking place. We do have minor issues with escaped pet (pot-bellied) and domestic pigs but we are not aware of any populations of wild-living feral pigs in Nebraska.

**Ohio – Submitted by Clint McCoy**

USDA Wildlife Services conducted feral swine surveillance and removal efforts on over a million acres of federal, state, and private lands. A total of 15 feral swine were removed from 2 counties (9 trapping, 4 aerial operations, and 2 sharpshooting) and 45 biological samples were collected from 11 animals. In FY22 Ohio Wildlife Services (WS) verified a total of $8,061 of damage caused by feral swine via UAS, aerial (fixed wing/helicopter), and ground surveillance. This is a decrease of $1,904 in verified damage from the previous year. Also due to these efforts, Monroe, Champaign, and Tuscarawas Counties feral swine populations will be removed from the Ohio Feral Swine population map. The Feral Swine Task Force discussion to declare these counties eliminated was set in September of FY 22, however due to an HPAI outbreak was postponed until FY 23.

Below is the FY 22 Feral Swine Population Map
There is currently no evidence to suggest that there are established populations of wild pigs that are breeding and self-sustaining in Ontario, and the ministry is working to keep it this way. Ontario’s Strategy to Address the Threat of Invasive Wild Pigs (2021) outlines the province’s proactive approach to address the wild pig problem. The strategy identifies necessary actions, highlighting the need for clear communications, robust policy, Ontario-specific research and management, and strong collaboration.
between governments, agencies, and industry partners. In Ontario, pigs (Sus scrofa) are regulated as an invasive species under the Invasive Species Act, 2015 and certain prohibitions apply, including:

- It is prohibited to release any pig into the natural environment. Certain requirements must be met if a pig escapes, including immediately notifying the Ministry of Natural Resources and Forestry (MNRF) and capturing or killing the pig as soon as practicable.
- It is prohibited to bring a live pig into a provincial park or conservation reserve.
- Hunting pigs is prohibited with exceptions for activities to protect property from damage caused by wild pigs, including for the purpose of maintaining biosecurity. A person who captures or kills a pig for protection of property must immediately notify the ministry and provide relevant information (i.e., the location and number of pigs captured or killed).
- Eurasian wild boar and their hybrids are being phased out of the province. As of January 1, 2024, their import, possession, transport, propagation, lease, trade, buying, and sale will be prohibited for all Ontarians.

The ministry receives and investigates all sightings of pigs that are outside a fence and not otherwise contained or under the physical control of a person. Sightings from the public include free roaming domesticated farmed pigs, pot-bellied pigs, and Eurasian wild boar. At this time, confirmed sightings of Eurasian wild boar are rare and most often occur close to wild boar farms. More information on wild pig sightings collected in Ontario from April 2021 to March 2022 is available:
https://www.ontario.ca/page/invasive-wild-pigs-ontario

Ministry staff investigate areas where reports have suggested a high likelihood that wild pigs are present. At these locations, ministry staff:

- engage with residents to learn as much as possible about wild pig activity;
- set up trail cameras to detect whether wild pigs are still in the area; and,
- where appropriate, ministry staff trap and remove invasive wild pigs from the natural environment.

Saskatchewan - Submitted by Leanne Heisler
The responsibility for wild boar management and control falls under the provincial feral pig task force, made up of three agencies: 1. Ministry of Agriculture (AG) is responsible for the overall management strategy; 2. Saskatchewan Crop Insurance Corporation (SCIC) is responsible for administering the feral wild boar control program and compensating landowners for wild boar damage to agricultural products; and 3. Ministry of Environment (ENV) advises the other two agencies on appropriate management and monitoring strategies and is responsible for managing the wildlife regulations relevant to wild boar control. All three agencies work closely with the mandate to eradicate feral wild boar from the province. Feral wild boar (i.e., boar not under the immediate control of a landowner) are classified as unprotected wildlife in Saskatchewan. Landowners have the opportunity to shoot a boar on their land to protect their property. However, we advise that sport hunting is detrimental to control efforts and should not be encouraged as an eradication method. All other hunting activity (e.g., trapping, baiting) is prohibited in Saskatchewan to reduce intentional introductions to new areas and potential for interference with SCIC’s control program. Feral wild boar have also been declared a pest, landowners are now obligated to report feral wild boar to the control program for immediate eradication.

The SCIC feral wild boar control program hires highly-trained trappers to eradicate boar from established, reproducing populations along the forest fringe in Saskatchewan. Several other trappers have been hired in other parts of the province where feral boar have been confirmed present. Anyone
can report a pig sighting to SCIC, who will dispatch a crop adjuster to confirm its presence. Once confirmed, SCIC trappers are notified and respond immediately. Trappers bait pigs into corral traps and use a remote trigger to catch them. The program has been in place since 2018 and has removed over 400 pigs since 2021. We saw a significant decline in the number of pigs trapped in 2022/2023 with no change in trapping or monitoring efforts. We are cautiously optimistic that SCIC’s control efforts are reducing the size of our largest population in the province.

Appendix 1: Midwest Members and States

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<th>STATE</th>
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<td>Iowa</td>
<td>Jim Coffey</td>
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