The Midwest Association of Fish and Wildlife Agencies 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/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.
MAFWA Ad Hoc Feral Swine Committee 2018 Annual Meeting/Progress Report (2017 calendar year)


Attendance: Steve Backs, IN, Chr.; Jim Coffey, IA, Terry Brunji, Kentucky; Dwayne Etter, Michigan; Alan Leary, MO; Eric Nelson, MN.

Summary: States are generally in cooperative partnerships with USDA-APHIS-Wildlife Services to implement feral swine/wild pig elimination efforts funded under the 2014 Farm Bill. The increased Federal funding provided additional personnel dedicated solely to wild pig elimination, equipment, and tools (e.g., aerial shooting, GPS “Judas” collars) previously unavailable to most states. The number of feral swine removed has increased substantially across the Midwest the last couple of years, reducing the wild pig range along significant reductions in free-ranging wild pig population levels (e.g. MI). Some states are now in “detection” mode with “no known established pig populations but remaining vigilant of any new populations of wild pigs (e.g., IL). The continual exchange of information on effective removal techniques occurs through informal networking among State, Provincial and USDA-WS personnel. The MFSC facilitated the networking and information exchange opportunities by scheduling the annual meetings to coincide with the International Wild Pig Conference or National Wild Pig Task Force. Technical presentations and various topic forums at the International Wild Pig Conferences are invaluable sources of information on wild pig issues and management. The recent 2018 International Wild Pig Conference (April 15-18, 2018; Oklahoma City; http://www.wildpigconference.com/agenda.asp) provided a full day of technical training of various types of capture and removal techniques along recent developments of potential toxicant delivery systems. There two full days of technical presentations covering recent research related to wild pig biology and ecology, management techniques, population modeling, toxicant development, human dimensions, and disease-pathogenic issues. The recently formed National Wild Pig Task Force (NWPTF) meeting provides another networking opportunity. The NWPTF is collectively made up conservation agency representatives from State, Federal, Private, University and NGO partners committed to the elimination of wild pigs across North America. The NWPTF serves as a technical advisory source and a communication medium for science-based information to help guide wild pig control, damage reduction, and/or eradication. The recent controversy surrounding the warfarin based pig toxicant “KAPUT” was an example of how the NWPTF can fill this advisory and communication role, and serve as a clearing house or repository for controversial issues pertaining to wild pig elimination. The MFSC Chair (Steve Backs, IN) represents the Midwest States’ Subcommittee of the NWPTF and Alan Leery (MO) serves as the chair of the NWPTF Policy Subcommittee; both also serve on the NWPTF steering committee. The NWPTF meets in odd numbered years and the International Pig Conferences meets in even years.

Director Action Items: Charge 1; Begin development of a broad Midwest feral swine management plan based on sound scientific and proven methods. The MFSC continues to table this charge due to the continual evolution of more effective wild pig control techniques, ever increasing body of knowledge from ongoing research, increasing efforts of the National Feral Swine Damage Management Program (USDA-AHPIS-WS), and recent development of the NWPTF. Charges 2-6 are being accomplished through continued networking among the Committee representatives, attendance at the International Wild Pig Conferences, and representative participation in the NWPTF.

Director Information Items: The value of the information exchanged at the International Wild Pig Conference is invaluable to keeping abreast of the quickly 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 the International Conference and the National Wild Pig Task Force meeting when possible, recognizing that participation of all MFSC representatives is beyond their primary or even secondary job responsibilities. The resistance and lack of cooperation by some landowners continues to be an obstacle to eliminating wild pigs, essentially creating ‘wild pig refuges’ or source populations that eventually disperse back into areas where pig removal was successful. The paradox is that some of these uncooperative, “recreation” type landowners are also recipients of State and Federal incentives for conservation practices or easements. The upcoming reauthorization of the Farm Bill was the primary policy issue of discussion at the International Wild Pig Conference. While draft versions include continued funding for the wild pig
elimination efforts, the current mark-up indicates that the funding will be split between USDA’s Wildlife Services and Natural Resources Conservation Service (NRCS). NRCS has not been a visible participant in the wild pig elimination effort nor present at the various wild pig conferences in recent years. There is concern the funding split will either dilute, detract, or inadvertently thwart ongoing successful efforts to eliminate wild pigs. The MAFWA Ad-hoc Feral Swine Committee would recommend the MAFWA Directors support the continual funding in the Farm Bill for wild pig elimination efforts but scrutinize how those funds will be allocated. If NRCS is to enter in to the wild pig elimination effort, it would hopefully be only in a supportive role to ongoing efforts by USDA-WS and the State Wildlife Agency partners. Perhaps any re-allocation of funding might provide dedicated grants to the State Wildlife Agency partners who up to now have had absorbed the costs of the wild pig elimination efforts within existing budgets.

Time and Place of Next Meeting: Tentatively at the next National Wild Pig Task Force meeting is tentatively scheduled to dove-tail with the 2019 Wildlife Damage Management Conference, March 4-7, 2019, Starkville, MS.

MAFWA Ad Hoc Feral Swine Committee – State Representatives (April, 2018)

MAFWA Feral Swine Committee Representatives
(updated 4.9.2018 by S. E. Backs)

IL Doug Dufford doug.dufford@illinois.gov 815-369-2414
IN Steve Backs sbacks@dnr.IN.gov 812.849.4586 ext 222
IA Jim Coffey james.coffey@dnr.iowa.gov P 641-774-2958
KS Shane Hesting shane.hesting@ksoutdoors.com 620-342-0658
KY Terry Brunjes Terri.Brunjes@ky.gov 800-858-1549
MI Dwayne R. Etter, ETTERD@michigan.gov 517-641-4903, ext 256
MN Eric Nelson, eric.nelson@state.mn.us 218-203-4336
MO Alan Leary alan.leary@mdc.mo.gov (573) 522-4115 ext. 3693
ND not participating
NE Sam Wilson sam.wilson@nebraska.gov 402 471-5174
OH Clint McCoy john.mccoy@dnr.state.oh.us 740.362.2410 Ext. 130
SD not participating
WI Brad Koele Bradley.Koele@wisconsin.gov 715-356-5211 ext 234
ON not participating
MB not participating
SK keep informed Todd Whiklo at 306-778 8262 todd.whiklo@gov.sk.ca
**Illinois** (submitted by Brad Wilson and Doug Dufford)

IDNR has teamed up with USDA – Wildlife Services (WS) to identify areas with feral swine, develop and implement a technical assistance program for landowners experiencing feral swine conflicts, coordinate and expand disease surveillance, conduct outreach to stakeholders and the general public, and provide direct control management assistance. Technical assistance and/or direct control assistance has been provided to numerous State, County, and Private landowners throughout the state since 2011 and a total of 459 feral swine have been removed. The two known self-sustaining breeding populations of feral swine in Illinois have been successfully eliminated. IDNR and WS continue to monitor reports of feral swine received from deer and turkey hunters as well as citizens throughout the state. Follow-up investigations are conducted to confirm the presence of this invasive species. A total of 44 reports were investigated in 2017, with no new populations of feral swine being confirmed.

**Indiana** (submitted by S. E. Backs)

Wild pigs (*Sus scrofa*) were intentionally and illegally released in two different regions of southern Indiana in the early 1990’s linked primarily a source in Louisiana and Mississippi. Morphologically, the wild pigs exhibit characteristics of the “Eurasian or Russian Boar” hybrids and not feral swine of domestic origin. Currently, only one definitive wild pig population exists in roughly 260 mi2 of southcentral Indiana. Removal of wild pigs is primarily by US Department of Agriculture-Wildlife Services (USDA-WS) working cooperatively with Indiana Division of Fish and Wildlife (IDFW). During the 2017 calendar year, USDA-WS technicians removed 226 wild pigs (74% more than the 130 in 2016) using a variety of techniques: aerial shooting (11); selective or sharp shooting (41); trapping (171) and snares (3). The increase in removals was facilitated by increasing from 2 to 4 field technicians, increased cooperation from landowners, and the continual use of the “Judas pig” technique. Biological samples were collected from euthanized wild pigs and submitted for disease testing (51 samples for Classical Swine Fever; 21 for Leptospirosis, Toxoplasmosis, Senecavirus aka Seneca Valley Virus) and 70 samples for continued DNA profiling at the USDA-WS labs in Colorado.

The proliferation of pot-bellied pig reports around the state has become more of an administrative nuisance and unnecessary waste of limited personnel investigation time. Most pot-bellied pigs and their hybrids appear to be abandoned, escaped, or poorly confined pets. Free-ranging swine of all types can generally be shot on sight in Indiana with landowner permission. Several pot-bellied hybrids have been removed from IDNR properties.

**Iowa** (Submitted by Jim Coffey)

The Iowa DNR remains the coordinating agency for feral hog incidents working with several State and Federal agencies. USDA wildlife services will continue to take a lead role on eradication and disease testing of located animals. The 2017 calendar year ended with five reports of nineteen wild hogs across the state. All five reports however came from separate counties. Of the 19 sighted hogs twelve were killed and one found dead. The counties in question are scattered around the state indicating that most of these are isolated incidents relating to escaped or purposefully released hogs. Of the hogs tested only one came back positive for brucellosis. The department of Natural Resources Wildlife Division plays a support role and becomes more aggressive if sightings are associated with Wildlife Management Areas.
**Kansas (Submitted by S. Hesting)**

We removed 727 feral pigs from Kansas last year. That is by far the most we have taken annually. Our 2017 aerial gunning was very limited. The pilot we have used for years had a medical issue and was grounded. We scrambled to find a late replacement and were able to patch together a couple days of flying in Bourbon/Linn County and a couple days in Chautauqua County.

Chautauqua County (306 total); 33 Aerial gunning; 273 Trapping/Night shooting

Bourbon/Linn County (421 total); 143 Aerial gunning; 278 Trapping/Night shooting.

Although our helicopter time was very limited last year, I feel we made up for it on the ground effort. We are definitely learning how and where to use the new technologies (Boarbuster wireless trapping and thermal night shooting). The good news is that we only have two areas in the state we are actively working on control measures. The bad news is that both of those areas have quite a few pigs. I still think our statewide population is around 1,000 pigs. That number changes on a daily basis depending on how many pigs are crossing the Oklahoma state line.

Landowner support and cooperation in Chautauqua County is excellent. Landowner cooperation in Bourbon/Linn actually improved a little as well. A handful of deer hunting properties that had previously denied us access to trap and fly came on board with the program. We still have the same handful of non-cooperative landowners but we did gain access to some more acreage in that area.

In addition we hired a new trapper for Cherokee and Labette counties in the summer of 2017 in anticipation of more pigs coming across the state line. The “invasion” hasn't quite happened in Cherokee and Labette counties like it has in Chautauqua County. There are a handful of pigs in this area (primarily lone boars which are hard to pin down) but one just has to drive 3-4 miles south and there is abundant feral hog sign in the fields and ditches. We have made many landowner contacts all along the state line in Cherokee and Labette counties. Landowner support and cooperation in this area appears to be excellent at this time. I think this area will need full time attention in the coming years.

**Kentucky (submitted by Terri Bunjes)**

In 2016, KDFWR re-evaluated methods to determine the number of wild pig breeding populations in KY. At least 9.2% of KY has known breeding populations of wild pigs. Of this percentage, there are 4 known breeding populations, comprising 11 counties. Twelve additional counties (10 percent of counties in KY) are suspected of having breeding populations. In the last year, eleven counties have had confirmed reports of wild pig observations or kills. However, all of these are considered isolated incidents until additional reports confirm otherwise.

Joint efforts from USDA Wildlife Services (WS) and KY Department of Fish and Wildlife Resources (KDFWR) have reduced all four known breeding populations significantly. The total number of pigs killed in 2017 by both agencies equaled 407. We anticipate that one population will be fully eradicated in 1-2 years. The remaining populations could be eliminated over the next several years with an aggressive campaign that includes legislative changes to eliminate sport hunting. Proactive eradication efforts, which include monitoring, communication, and public support, will always be necessary to prevent the establishment of new populations.
**Michigan** (submitted by Dwayne Etter)

Summary:

- Made additional strides towards eliminating feral swine from the Upper and Lower Peninsulas.
- Participated in two lawsuits regarding possession of prohibited swine.
- Continued conducting research on feral swine:
  - Movements and habitat use
  - Judas hogs
  - Ecological and agricultural damage
  - Testing eDNA to detect feral swine

Activity and Removal:

We continue to receive scattered reports of feral swine throughout the Lower and Upper Peninsulas. Most reports in the Lower Peninsula (LP) are potbelly pigs and escaped domestics. In the Upper Peninsula (UP), most reports were confirmed as Russian boars. We also documented reproduction by Russian boars in the UP.

Because the number of feral swine reports have declined substantially since 2012, MDNR asked all hunters registering a deer about feral swine harvests or sightings. From 30,000 hunters we generated 185 reports that were forwarded to USDA-WS for follow up.

In 2017, USDA-WS lethally removed 8 feral swine including 6 from the UP and 2 from the LP. USDA-WS and MDNR cooperated to put GPS-collars on 2 feral swine in the UP to us as “Judas pigs” to inform removal efforts. Additionally, the two Judas pigs were removed from the LP and no additional reports of Russian boars have been confirmed in the LP since their removal.

Legal Actions:

In 2016, MDNR participated in two lawsuits regarding possession of prohibited swine (e.g., Russian boars or hybrids thereof). One case was heard in Marquette County Circuit Court in June/July (Greg Johnson/Bear Mtn. Lodge vs MDNR). In this case, the court found that Mr. Johnson possessed prohibited swine. Mr. Johnson appealed the Court’s decision and in October 2017, the Michigan Court of Appeals upheld the Circuit Court’s order. Mr. Johnson has appealed the Court of Appeals decision to the Michigan Supreme Court. In October 2016, the second case (Roger Turunen vs. MDNR) was heard in Baraga County Circuit Court. In this case the court ruled that MDNR failed to meet its burden in demonstrating that Mr. Turunen pigs were prohibited swine. MDNR has appealed this decision and the argument will be heard on March 13, 2018.

Research:

In 2017, trapping of feral swine was conducted by USDA-WS with support from MDNR. Trapping resulted in 2 additional radio-collared animals (10 total for the study) both in the central UP. Using GPS locations from the 2 radio-collared swine, USDA-WS successfully removed additional unmarked feral swine. MSU is analyzing the movements of the radio-collared swine in response to targeted removals of associated animals.

Field crews visited 29 sites (19 rooted, 10 random) that were ~20 ac in size during the summer of 2017. We collected information on localized plant communities, the amount of exposed mineral soil, and tree damage. Additionally, we visited 5 sites where the timing of rooting events was documented. At these sites we collected soil cores to measure the depth of the organic material. We aim to use this measure as an index of how long-ago rooting occurred. Crews also conducted a damage assessment in a field of corn that was occupied by feral swine.
We analyzed trail camera photographs to determine feral swine group size and activity at baited sites. Based on 72 individual events (separated by at least 12 hours), mean group size was 2 (range 1-7). Pigs responded better to baited sites in summer compared to winter; indicating removal efforts may be more successful in summer.

Use of environmental DNA (eDNA) is an emerging technology for noninvasively detecting animals by testing environmental (e.g., water and soil) samples. To test the efficacy of detecting swine DNA in 2 different stream environments, we introduced swine body parts and systematically sampled to 400 meters downstream. We collected additional stream parameters (e.g., turbidity, temperature, velocity) to determine their impact on detecting swine DNA. In 2017, we collected 1,179 water samples on 19 different sampling occasions. Samples are presently being analyzed at Central Michigan University.

Minnesota (Submitted by Eric Nelson)

In 2017 Minnesota is still feral swine free. We do have instances of escaped domestic swine “at large”. A total of 13 swine at large complaints in 8 different counties were investigated through December of 2017. We were successful in implementing 2015 legislation that gave authority to the Department of Natural Resources (DNR) to remove swine allowed to be living in the wild and issue a citation for those responsible. USDA Wildlife Services staff assisted in 5 site visits in which two they provided monitoring via trail timers and trail cameras. One other site a trap was monitored and a trap was deployed to remove swine determined to be at large and allowed to be living in the wild. No swine were captured at that site. The location the trap was set did have a pig shot by the public on private land and surrendered to the department.

One individual who has for the past 2 years continually allowed his swine to escape and live in the wild was cited under our feral swine statute. USDA Wildlife services has been continually monitoring and in some cases removing swine from this area for the past two years. Minnesota Board of Animal Health (MBAH) staff have worked with the individual on adequate fencing of swine for the continual escapes from his operation. The individual was issued multiple notice of violations by MBAH staff and a warning by DNR enforcement in 2016 after swine were removed by USDA Wildlife Services staff.

The last notice of violation issued by MBAH was in the beginning of September of 2017. The notice stipulated that the individual had until September 30th be compliant by sell to market all adult boars except for one. He could keep 40 sows and market all adult sows over 40 head. All male feeder pigs needed to be neutered by November 1st 2017 and in the future remaining hog herd must be manage and fence in a manner to prevent escape. On September 19th 2018 and are wildlife manager found evidence of swine use on state wildlife management land adjacent to the individuals property and had received complaint from adjacent neighboring property owners that swine were still at large on their property and causing damage. At the end of September MBAH staff went on site and found he was not compliant with the order and coordinated shipment of 53 adult swine to a local live stock market. The individual had to pay hauling, vet, commission, ear tag and other costs associated with selling the swine totaling around $786 and was able to keep all other funds generated from the sale which was around $2,800.

In mid-October more complaints were filed by adjacent landowners of feral swine on their property and causing damage so DNR enforcement action was taken and the individual was cited for allowing feral swine to free range. The individual plead not guilty and a jury trial was set for the end of March 2018.

We are reliant on USDA Wildlife Services to conduct all swine 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 is still working on drafting a feral swine response plan for the state with lessons learned from implementing our removal authority under state statute and our first citation issued under this statute. The committee is composed of staff from Minnesota DNR Division of Fish & Wildlife and Ecological & Water Resources, USDA Wildlife Services, and Minnesota Board of Animal Health.
Missouri (Submitted by Alan Leery)

In July 2017 the Missouri Feral Hog Partnership (a group of 11 state and federal agencies dedicated to eliminating feral hogs from Missouri) completed a Statewide Strategic Plan for Feral Hog Elimination in Missouri. The Plan divides the state into Elimination Areas and calls for the addition of full time trappers in each of those areas. The Missouri Conservation Commission approved $1.8 million in the 2018 Fiscal Year budget to fully fund the Plan. The Conservation Department (MDC) signed a cooperative agreement with the US Department of Agriculture – Wildlife Services (WS) to use this funding to hire full time feral hog trappers and purchase equipment for them as called for in the Plan. Other members of the Missouri Feral Hog Partnership have also made significant contributions to support the Plan. The Conservation Commission also approved funding for a graduate research project that will develop a method to determine feral hog occupancy on the landscape. In addition, the research project will develop a method to measure the success of elimination efforts.

During the summer of 2017 MDC created a Feral Hog Elimination Team Leader position. This person is leading all operational aspects of feral hog elimination efforts for MDC. Another of his responsibilities is to assure communication between all agencies that are engaged in feral hog trapping activities in Missouri.

In 2017 we removed over 1,200 more feral hogs from the landscape than we had in any previous year and at this point we have removed more in 2018 than we had by this time last year.

MDC also continues to engage in an aggressive outreach campaign to educate the public about feral hogs and the damage they do to our fish, forest, and wildlife resources. These outreach efforts are also aimed at informing landowners that MDC and WS have staff that will assist them if they have feral hog issues on their property.

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 2017 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.

USDA-WS technicians Jordan Welker and Emily Finch, check trail camera and rebaiting at a potential trap site in Indiana.