MAFWA Ad-hoc Feral Swine Committee - 2020 Annual Report

Complied and Submitted by Steven E. Backs, Chr., MAFWA Ad-hoc Feral Swine Committee 4/8/2020



Two gravid adult Eurasian sows removed during aerial gunning conducted in Indiana, March 16, 2020, as part of the National Feral Swine Damage Management Program; illustrates how 2 sows left on the landscape would have potentially resulted in a 13 pig a sounder by May, certainly posing a threat to native flora and ground nesting fauna as well as agricultural crops (photo credit: D. Ray)

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.

MAFWA Ad Hoc Feral Swine Committee 2020 Annual Meeting/Progress Report

Meeting Time and Place: The annual meeting of the MAFWA Feral Swine Committee (MFSC) was originally scheduled to be held jointly with the Wild Hog Working Group of the Southeast Association of Fish and Wildlife Agencies (SEAFWA) at the 2020 International Wild Pig Conference and National Wild Pig Task Force (NWPTF) meeting, April 6-9th in Jacksonville, Florida. Due to the COVID-19 outbreak the conference and meetings were postponed, possible new dates TBD. During the 4/7/20 conference call, the NWPTF governing board proposed exploring "virtual" Wild Pig Conference with pre-recorded presentations from the 2020 conference presenters, possibly a wild pig session at the Animal Damage Conference, April 2021, or at the SEAFWA conference in VA in 2021. A venue was secured for 2022 International Conference in Nashville, TN, in April. The MAFWA and SEAFWA pig group chairs will likely seek a joint meeting again at one of the venues.

Summary: The MAFWA Feral Swine Committee annual report is summarily reduced to the respective State and Provincial reports summarily submitted with the primary function of the MAFWA Feral Swine Committee being information and exchange network among states and provinces. The committee recently updated and compiled information on the legal hunting status of wild pigs in the Midwest states. The recent involvement of the Canadian provinces in the MAFWA Feral Swine Committee was stimulated in part by concerns over the possible arrival of African Swine Fever (AFS) from Asian countries and their desire to know about wild pig control techniques used in the states. Canada's Federal department of Environment and Climate Change has recently provided project funding to the Canadian Wildlife Health Cooperative (CWHC) to coordinate efforts across Canadian jurisdictions in addressing the invasive wild pig issue. The CWHC has since established two working groups; one strategic group to lead policy development and strategic planning for national priorities and goals, and one operational group to facilitate information sharing of technical information and expertise. 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 be conducted by USDA-APHIS-Wildlife Services through cooperative agreements with states as part of the National Feral Swine Damage Management Program (NFSDMP).

The term "elimination" in terms of eliminating feral swine is loosely defined as experienced by Illinois in 2019 when some feral swine reappeared on their landscape in two different locations and the source of those pigs was not reported. The reappearance of feral swine in Illinois also illustrates the value of DNA profiling to determine source or origin. Kentucky and Kansas appear to be gaining some ground in feral swine in some parts of the state but as Kentucky reported this year, they still have some sizable populations to address. Kentucky has launched a well-organized social media and outreach effort modeled after Missouri's outreach programs. Missouri continues to remove a large number of wild pigs (>10,000) at a sizable cost to the Missouri Department of Conservation. Michigan has experienced a sizable reduction in feral swine but continues to keep their outreach efforts going in hopes of warding off future illegal releases of feral swine. Ohio is working toward narrowing their elimination priorities and again demonstrated that that wild pig shooting preserves can be a troublesome source.

As in previous years, 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 is that they are frequently recipients of State and Federal incentives for conservation practices or easements. Related to the pig refuge issue, is a new work around of existing feral swine regulations in at least one state, is to ear tag captured wild pigs, call them domestic, and then hunt them inside high fence.

A continual, chronic and often increasing problem facing all States and Provinces is the apparent abandonment, poorly confined, illegally released or dumped carcasses of pot-bellied, Heritage, Heirloom pigs or hybrids thereof. Inherent to their existence, are issues related to their legal definition or status within a respective jurisdiction often compromise removal or elimination. Many municipal animal control personnel are reluctant to deal with these pigs and occasionally these pigs develop a social media following of sympathizers. Unfortunately, these types of pigs will persist as free-ranging populations, will cause damage to native flora and fauna, residential lawns, or agricultural row crops and are potential disease sources, something of particular interest with AFS concerns. Fortunately, if removal is possible, their general lack of wariness and relative athleticism due to their likely origin, facilitates removal but those removal efforts taxes limited personnel time and resources that could be addressing more critical feral swine/wild pig problems.

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 and fast evolving body of knowledge from ongoing research, increasing efforts of the (USDA-AHPIS-WS), facilitated by the existence of the NWPTF. Charges 2-6 are being accomplished through continued networking among the Committee representatives, attendance at the 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 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 organizing and communications related to the NWPTF and IWPC's. The NWPTF has received some temporary funding (\$20K/Year) to allow the NWPTF time to secure more permanent collective funding sources, e.g. Association of Fish and Wildlife Agencies (AFWA) or regional organizations, e.g., SEAFWA and MAFWA.

One proposed funding mechanism is to secure membership funding in the form of a group or regional organization level dues from SEAFWA and MAFWA. The NWPTF and The Berryman Institute are developing a list of future "deliverables". The MAFWA Feral Swine Committee would like the MAFWA Directors to consider this proposed group membership dues proposal and advise the Committee how this might be pursued.

Time and Place of Next Meeting: TBD presumably after the COVID-19 outbreak subsides to manageable and safe levels across the country.

MAFWA Ad Hoc Feral Swine Committee – State and Provincial Representatives

IL	Doug Dufford	doug.dufford@illinois.gov 815-369-2414
IN	Steve Backs	<u>sbacks@dnr.IN.gov</u> 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	Terri Brunjes	Terri.Brunjes@ky.gov 502-892-4548
MI	Dwayne R. Etter, Melissa Nichols,	ETTERD@michigan.gov 517-641-4903, ext 256 NicholsM2@michigan.gov
MN	Eric Nelson,	eric.nelson@state.mn.us 218-203-4336
МО	Alan Leary	<u>alan.leary@mdc.mo.gov</u> (573) 522-4115 ext. 3693
ND	not participating	
NE	Sam Wilson	sam.wilson@nebraska.gov 402 471-5174
ОН	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
<u>ON</u>	Jeremy Downe Chris Heydon Erin Koen	Jeremy.Downe@ontario.ca chris.heydon@ontario.ca Erin.Koen@ontario.ca
МВ	Janine Wilmot,	Janine.Wilmot@gov.mb.ca, 204-281-2924
SK	keep informed:	Todd Whiklo at 306-778 8262 todd.whiklo@gov.sk.ca

State/Province Status Reports Submitted

Illinois (submitted by Brad Wilson, USDA, WS)

IDNR has teamed up with USDA – Wildlife Services (WS) to identify areas with feral swine (FS), develop and implement a technical assistance program for landowners experiencing FS 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 land owners throughout the state since 2011 and a total of 485 FS have been removed. A total of four known, self-sustaining breeding populations of FS in Illinois have been successfully eliminated. IDNR and WS continue to monitor reports of FS 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 38 reports were investigated in 2019, with one new isolated population of FS being confirmed in Pope County as well as one adult boar in Pulaski County.

After local hunters and agricultural producers alerted WS to an emerging FS population in Pike County, IL, the USDA-WS program worked closely with the IDNR, Pike County Soil and Water Conservation District, Pike County Farm Bureau, Illinois Department of Agriculture, USDA NRCS, and the Illinois State Police (aerial surveys) to identify the source of this population. WS removed 26 FS from the Township and continues to conduct surveillance for additional FS in the region. No other reports of FS among this area has been received since January, 2019.

WS has received reports of FS in Pope and Pulaski Counties in southern Illinois. On the ground surveillance and removal efforts began on March 19, 2019 in an effort to determine distribution, density and begin to eliminate populations before they become self-sustaining. WS has confirmed one adult boar among private properties in Pulaski County and at least 10 adult FS in Pope County among private properties and Shawnee National Forest lands spanning approximately 100 sq mi. FS damage management efforts among these two counties will continue through 2020.



(Pulaski County - 2019)

Indiana (submitted by S. E. Backs)

USDA-Wildlife Services and Indiana Division of Fish and Wildlife (IDFW), IDNR personnel have continued efforts to reduce the number of Eurasian wild pigs from 3 counties in south-central Indiana. During the 2019 calendar year, USDA-WS field technicians removed 66 wild pigs (aerial 21, firearms 31, and live traps 14) and submitted 33 serum samples for Classical Swine Fever testing and archiving and 36 tissue samples for DNA profiling to the USDA-WS labs in Colorado. Since the inception of the National Feral Swine Damage Management Program (NFSDMP) in Indiana in 2014, nearly 600 wild pigs have been removed from Indiana through the USDA-WS and IDFW partnership. Prior to 2014, approximately 200 wild pigs were removed by USDA-WS and IDFW personnel from 2010-2013; total of roughly 800 wild pigs removed

since 2010, not counting wild pigs removed by IDFW prior to 2010 and incidental take by landowners and hunters since wild pigs were released into Indiana around 1992.

Overall, the number of Eurasian wild pigs has been substantially reduced in the target 3 counties with the USDA-WS feral swine reduction project shifting toward the "elimination phase" with hopefully elimination completed in the next couple of years. The existence of "wild pig refuges" created by uncooperative landowners, generally for recreational hunting purposes (e.g., primary deer hunting leases), continues to be an obstacle to more effective overall pig removal. The refuges often serve as 'source" populations replenishing the population voids created agency control efforts.

A chronic and an ever increasing swine problem across the state is the abandonment, poorly confined, illegally released or dumped (carcasses) pot-bellied/Heritage pigs that were likely unwanted pets. These pigs still pose a threat to native flora and fauna along with being a potential reservoir for swine pathogens. Free-ranging swine of all types can generally be destroyed on sight in Indiana with landowner permission, possession of a live wild pig and pursuit with dogs is not allowed. Wild pigs are on the list of invasive species in Indiana.

Iowa (Submitted by Jim Coffey)

The responsibility of State Feral Hog Coordinator falls under the lowa 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 will assist when needed.

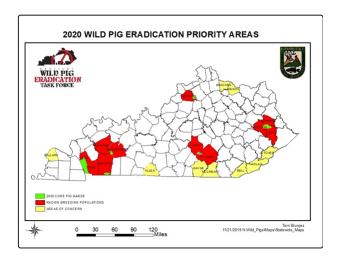
The 2019 calendar year was relatively uneventful. Less than a dozen reports of hogs came in from all parts of the State. Many of these reports were not confirmed. A few reports did include poor trail cam pictures but follow up could not confirm the presences of hogs in the area. Agencies did not kill any hogs during this year, however we did investigate a few dead hogs that turned out to be escaped/released domestic hogs. No disease testing was completed on these animals. We do plan on continuing with feral hog information in our DNR hunting regulations booklet for 2021. Several issues have arrived with a new executive administration as to the role state and federal agencies will be able to continue to monitor and control hogs in Iowa. We are working with the administration to clarify the authority and provide future guidance if feral hogs increase in the state.

Kansas (Submitted by S. Hesting, KDWPT and Curran Salter, USDA/APHIS/WS/KS)

We removed a total of 385 feral pigs in 2019 in Kansas counties (Bourbon/Linn-152; Cowley/Chautauqua-194; Cherokee/Labette-39). Same issues as always in Bourbon/Linn with landowner access. We have seen a noticeable decline in the southern part of this area from Xenia south, but pigs are still present in the northern part of Bourbon and extreme southern Linn. We are also observing a slow but steady increase in activity along the Arkansas River south of Ark City. KS WS removed 32 from this area last year and expect this trend to continue. We have been successful thus far at keeping feral pig densities very low along the state line from Ark City to Baxter Springs but continual "maintenance" efforts will be required for the foreseeable future. We will be flying next week and again in February and March.

Up to 2013, the USDA-WS eliminated approximately 6000 feral hogs. The total eliminated since the inception of the KDA/USDA-WS partnership is approximately 10,000.

Kentucky (submitted by Terri Bunjes)



KDFWR, in partnership with the KY Wild Pig Eradication Task Force, recently initiated a media campaign to increase public support for wild pig eradication. Similar to Missouri Department of Conservation's message, our "Report, don't shoot" campaign persuades the public to report wild pig sightings as an alternative to shooting pigs. The overall goal of the media campaign is to gain public support to prohibit wild pig sport hunting in the future. The media campaign included the creation of educational materials, social media videos, a complete webpage overhaul, the inclusion of an electronic reporting system, and articles in KY's Fish and Wildlife magazine and publications. Sample public outreach items are below and more information can be found at https://fw.ky.gov/InvasiveSpecies/Pages/Wild-Pig-Home.aspx









Kentucky currently has six known breeding populations and five areas of concern, covering twenty counties. Most breeding populations in KY have been reduced significantly. Joint efforts between USDA Wildlife Services (WS) and Kentucky Department of Fish and Wildlife Resources (KDFWR) resulted in the eradication of 48 wild pigs in 2019. Low numbers are indicative of shrinking populations due to the success of trapping and outreach efforts. Intensive eradication efforts in north central KY, have almost entirely eradicated the largest known population in KY. The last known sounder was removed September 2019. Concentrated surveillance and communication efforts have found

no additional females. To our knowledge, only a few boars remain on the landscape. Almost 600 wild pigs have been removed from this population since 2016. In addition, surveillance efforts in the Pond River core pig range, located in

Muhlenburg and Christian counties, found no sign of pigs in 2019. Surveillance efforts will continue to determine if the population has been fully extinguished.

Two emerging populations on federal lands, Land between the Lakes National Recreation Area (LBL) in Trigg and Lyon counties and Fort Campbell U.S. Army Base in Christian County, have recently come to our attention. Wildlife Services and Kentucky Department of Fish and Wildlife Resources collaborated with agency personnel and local government officials to develop eradication plans for LBL. As a result, aerial operations began January 2020, resulting in the removal of 194 wild pigs south of the KY border in Tennessee. Fort Campbell also allowed aerial operations this year. Two hundred wild pigs were removed in January 2020, with the majority removed from the KY portion of Ft. Campbell. Future discussions with Ft. Campbell leaders are necessary to facilitate the removal process.

Manitoba (submitted by Janine Wilmot)

Wild boar populations are not formally monitored or managed in Manitoba. However, the Province is aware of scattered populations, primarily in the southern areas of the province, and most abundantly in and around Spruce Woods Provincial Park. The public is requested to report wild boar sightings to the Province, but few reports are received annually. In 2018/19, seven reports of wild boar sightings were received, involving about 45 wild boar, including 20 that were reported harvested.

Manitoba does not have a funded program to remove wild boar from the landscape. Since 2001 Manitoba has been declared a Wild Boar Control Area, which allows residents of the province to shoot wild boar with few restrictions. Harvested wild boar are required to be reported to the Province within seven days, but the reports that are received likely represent only a fraction of the wild boar that are removed.

In 2018, Manitoba staff began working collaboratively with a local game and fish club to attempt corral trapping of wild boar sounders. Preliminary results have shown only minor success due to (1) difficulties in locating sounders where landowners are cooperative with trapping efforts, (2) technological difficulties in being able to remotely deploy the corral trap drop-gate, and (3) time constraints due to volunteer labor primarily being used for the project. The 2018/19 report for the project's first year indicated the removal of ten wild boar through these efforts.

Canada's Federal department of Environment and Climate Change has recently provided project funding to the Canadian Wildlife Health Cooperative (CWHC) to coordinate efforts across Canadian jurisdictions in addressing the invasive wild pig issue. The CWHC has since established two working groups; one strategic group to lead policy development and strategic planning for national priorities and goals, and one operational group to facilitate information sharing of technical information and expertise. Manitoba has representatives on both working groups.

Michigan (submitted by Dwayne Etter)

<u>Activity and Removal:</u> We continue to receive a few scattered reports of feral swine throughout Michigan. Most confirmed reports are potbelly or escaped domestic pigs with only a few confirmed Russian boars. United States Department of Agriculture – Wildlife Services (USDA-WS) removed 4 feral pigs in 2019.

Michigan Department of Natural Resources (MDNR) maintains a voluntary online feral swine reporting system. Because of the low number of voluntary feral swine reports received, MDNR asked all hunters registering a deer about feral swine sightings. This included over 30,000 hunters in 2019, and USDA-WS followed up on 92 reports of sightings. With partners USDA-WS and Michigan United Conservation Clubs we conducted 127 active outreach efforts including presentations, trainings and visits to schools.

Research: We contributed three peer-reviewed publications from research conducted in MI.

Gray, S.M., G.J. Roloff, D. B. Kramer, D.R. Etter, K. C. Vercauteren, and R.A. Montgomery. In press. Effects of wild pig disturbance on forest vegetation and soils. Journal of Wildlife Management.

Hauger, A.N., K.M. Hollis-Etter, D.R. Etter, G.J. Roloff, and A.R. Mahon. 2020. Use of environmental DNA (eDNA) in streams to detect feral swine (Sus scrofa). PeerJ, https://peerj.com/articles/8287/

Etter, D.R., M. Nichols and K.M. Hollis-Etter. 2020. Wild Pigs in the Northeast Region of North America. Pages 319-346 in K. Vercauteren, J. Beasley, S. Ditchkoff, J. Mayer, G. Roloff and B. Strickland, editors. Invasive Wild Pigs in North America: Ecology, Impacts and Management, 1st Edition. CRC Press, Boca Raton, FL, USA, 480 pp.

Minnesota (Submitted by Eric Nelson)

In 2019, Minnesota continues to be free of feral swine. Currently our cases are mostly escaped domestic swine "at large". We had one repeat location from previous years where swine were found to be living in the wild and removed by USDA Wildlife Services. Follow-up monitoring has resulted in no swine being detected. Sixteen feral swine complaints in 15 different counties were investigated through December, 2019.

One individual was cited with a warning for admitting to knowingly allow five swine to live in the wild and cause damage to surrounding properties. USDA Wildlife Services staff assisted in three site visits. In two site visits they provided monitoring and in one site visit they performed monitoring and removal. Landowners or USDA Wildlife Services staff removed nine swine living in the wild. At two locations, six swine were shot by the public on private land and surrendered to the department. Samples of all swine removed in the state were taken by USDA Wildlife Services and submitted for analysis.

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 updating a draft feral swine response plan for the state. This draft will include lessons learned from citations/warnings issued as well as new information from a developing statewide response plan for African Swine Fever. 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 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 for FY20. The funding continues to go to a cooperative agreement with the US Department of Agriculture – Wildlife Services (WS) to employee full time feral hog trappers 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 2019 the Partnership removed over 10,495 feral hogs from the landscape. That is about 1,100 more than we had in any previous year. In January and February of 2020 we have removed 2,223 feral hogs from the landscape.

During 2019 the Partnership worked to assist the US Forest Service in passing a ban on hog hunting on all Forest Service land in Missouri. The regulation was passed on Dec. 7, 2019. This was a major step in our feral hog elimination efforts here in Missouri. There were some groups that strongly opposed this regulation and therefore it received a lot of media and political attention. In order to address feral hog issues on these Forest Service lands, MDC has committed to sending 150 additional staff from around the state in groups of 50 for one week rotations to southern Missouri to work on feral hog elimination. This expanded effort will go from mid-January through March. The USDA – APHIS, US Forest Service and other members of the Partnership have also sent staff and provided additional resources for this expanded effort

The Partnership 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. The main message is "Report. Trap. Eliminate. Missouri's Cooperative Feral Hog Solution."

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 2019 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 J. Clint McCoy)

USDA Wildlife Services conducted feral swine surveillance and removal efforts on nearly 3 million acres of federal, state, and private lands. A total of 102 feral swine were removed from 6 counties (97 trapping, 5 sharpshooting), and 164 biological samples were collected from 31 animals. In FY19 Ohio Wildlife Services verified a total of \$7,189 of damage caused by feral swine via UAS, aerial (fixed wing/helicopter), and ground surveillance. While this estimate of damage was higher than FY18, it is still a drastic decrease from 2017 when WS verified \$23,990 and from 2016 were \$42,269 of damage was verified.

Prior to 2008, a lack of funding and resources limited the investigation of many feral swine reports in Ohio. Consequently, entire townships were designated as having feral swine, when many times the sightings or damage was misidentified, or the result of escaped domestic swine. In many cases, escaped domestic swine were recovered or removed by hunters, but the polygons were never removed from the map. In 2016, a plan was developed to remove erroneous polygons (elimination zones) from the Ohio feral swine distribution map. According to Wildlife Services National Feral Swine Damage Management Program, a population may be removed from the map if no sightings or damage have been confirmed in two years. In many cases, the polygons in question for the Ohio map have received little or no investigation since they were first submitted. After two years of investigation, Ohio Wildlife Services compiles the results for each Elimination Zone investigated and provides the results to the Ohio Joint Agency Feral Swine Task Force. If the task force agrees that sufficient effort has been made to declare the Elimination Zone "Feral Swine Free", the polygon will be removed from the National (and Ohio) feral swine map. After two years of extensive surveillance efforts, using public outreach, meeting with landowners, and UAS, fixed wing, helicopter surveys, the Ohio Joint Agency Feral Swine Task Force agreed to remove Zone K in Morgan County from Ohio's feral swine population map.

In FY 19 Ohio WS was able to eliminate an emergent population of feral swine in Trumbull County. While investigating two hunter harvest reports Ohio WS located 22 feral swine in the immediate area. Upon further investigation it was found that a hunting preserve, that offered feral swine hunts, had recently closed and all fencing removed. Due to the swift action from responsible landowners and the Ohio Division of Wildlife, Ohio WS was able to remove all 22 feral swine in one trap catch. Continued monitoring efforts indicate the absence of feral swine in the area.

Ontario (Submitted by Erin Koen and Jeremy Downe)

The Ontario Ministry of Natural Resources and Forestry (MNRF) is undertaking efforts to learn more about the number and locations of wild pigs in Ontario by collecting sightings from the public. Sightings can be submitted to an email address dedicated to wild pig reporting and/or to an iNaturalist webpage. MNRF also launched a communications campaign, including social media, to solicit sightings and share information.

In 2019, MNRF received 110 unverified reports of wild pigs in Ontario. These unverified reports consist of live wild pigs, dead wild pigs, and wild pig sign, and include both old and recent observations. These sightings are scattered in small pockets across hundreds of kilometers between Windsor to Hawkesbury and north to Timiskaming.

In winter 2020, MNRF launched a wild pig detectability pilot study to investigate locations where sightings indicate there is a high likelihood that wild pigs are present. At these locations, staff are speaking with local residents and setting up baited trail cameras. At the time of writing, preliminary data suggest that most wild pig sightings are isolated escaped domesticated pigs; a small number of sightings appear to be of mixed or pure Eurasian wild boar descent. Based on the sightings received to date, it does not appear that there are any established populations in Ontario.

At this time, hunting wild pigs in Ontario is not recommended. Private landowners have the right to protect their property from wildlife damage, including damage caused by wild pigs. While farming Eurasian wild boar is legal in Ontario, captive hunting preserves for wild boar are not legal in Ontario. Ontario is also exploring regulatory approaches under the Ontario's Invasive Species Act to address the threat of wild pigs in the province.

Legality of Hunting Feral Swine or Wild Pigs by State or Province (survey conducted by J. C. McCoy, OH DNR)

State	Hunting Status of Feral Swine or Wild Pigs	Comments
Illinois	Banned	Allow opportunistic take during deer firearms seasons
Indiana	Banned on public land	Landowners discouraged from allowing hunting - prefer WS trapping
Iowa	No regulations on feral swine	Interested in what we do, so they may follow suit
	No hunting of feral swine allowed by statute	
	(http://www.kslegislature.org/li/b2019_20/statute/047_0	Landowners and designated agents of landowners (approved by KDA via
	00_0000_chapter/047_018_0000_article/047_018_0009_	permit) can shoot feral swine when found on their property. All feral hog
Kansas	section/047_018_0009_k/)	sightings/control must be reported to the KDA.
		Night shooting prohibited. Currently engaged in very well done media
		campaign (see examples), with ultimate goal of banning pig hunting.
Kentucky	No ban in place at this time	Plan to continue to allow landowners to remove nuisance animals
Michigan		
		Any swine taken must be surrendered to DNR within 24 hrs (you can
Minnesota	Banned	shoot a pig, but you must report it and surrender carcass)
		Allow opportunistic take during deer and turkey seasons. Not
Missouri	Banned on public land (2016)	considered wildlife, so no authority to stop hunting on private land
		May have been first state to institute a ban, and now free of any known
Nebraska	Banned	populations. Can authorize agents (landowners) to kill
North Dakota		
		Only restrictions are no night hunting during deer firearms seasons, and
Ohio	No ban in place at this time	no live transport
South Dakota		
Wisconsin		
Manitoba	No ban in place at this time	