

2018 MAFWA Committee Report on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

MEETINGS TIME & PLACE

CITES 29th Animals Committee Meeting, July 2017; Geneva, CH

Joint State/Federal CITES Meeting, August 2017; Washington DC

AFWA Annual Meeting, September 2017; Sandy, UT

Joint State/Federal CITES Meeting & AFWA International Relations Committee

CITES 69th Standing Committee Meeting, December 2017; Geneva, CH

83rd North American Wildlife & Natural Resource Conference, March 2018; Norfolk, VA

CITES Technical Work Group Meeting & AFWA International Relations Committee

Trilateral Committee for Wildlife & Ecosystem Conservation, April 2018; Shepherdstown, WV

CITES Interagency Coordination Committee, hosted quarterly by USFWS in Washington DC

CITES Technical Work Group also conducted business via numerous conference calls

CITES TECHNICAL WORK GROUP REPRESENTATIVES

Carolyn Caldwell- MAFWA (MAFWA CITES Technical Work Group Representative)

Rick Jacobson- NEAFWA (Connecticut Department of Energy & Environmental Protection)

Buddy Baker- SEAFWA (Louisiana Department of Wildlife & Fisheries)

Jim deVos- WAFWA (Arizona Game & Fish Department)

Deborah Hahn- Association of Fish & Wildlife Agencies

Bob Broscheid- U.S. CITES Delegate Representing the State Fish & Wildlife Agencies and
International Relations Committee Co-Chair (Colorado Parks and Wildlife)

CITES OVERVIEW

The Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES) is an international trade agreement among 183 countries to ensure that international trade in specimens of wild animals and plants does not threaten species' survival. CITES works by subjecting international trade in specimens of selected species to certain controls. These require that all imports, exports, re-exports, and introductions from the sea of species covered by CITES have to be authorized. The species covered by CITES are listed in three Appendices, according to the degree of protection they need. Appendix I includes species threatened with extinction. Trade in specimens of these species is only permitted in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but for whom trade must be controlled in order to avoid utilization incompatible with their survival. Appendix III contains species that are protected in at least one country, which has asked other CITES countries for assistance in documenting trade.

The U.S. Fish and Wildlife Service (USFWS), Office of International Affairs, administers CITES for the United States. The USFWS solicits input and feedback on issues of importance from the state fish and wildlife agencies through the CITES Technical Work Group of the International Relations Committee of AFWA. The Technical Work Group consists of one representative from each of the four regional associations who work on behalf of states in concert with the USFWS on CITES matters. This state-federal partnership has been effectively working since 1994.

EXECUTIVE SUMMARY OVERVIEW

CITES updates presented in greater detail include: 1) Species Amendments, Recommendations on Resolutions, Decisions, and Agenda Items that the United States Might Consider Submitting to

the CITES Conference of the Parties; 2) Snake Trade and Conservation Management: Traceability; 3) CITES Appendix III Listings; 4) CITES 30th Animals Committee Meeting, July 2018; and 5) USFWS International Affairs Program Staffing Changes.

DIRECTOR ACTION ITEM

No action Items at this time.

DIRECTOR INFORMATION ITEMS

Possible Species Amendments, Recommendations on Resolutions, Decisions, and Agenda Items that the United States Might Consider Submitting to the CITES Conference of the Parties

The USFWS solicited public comment on species to be considered as candidates for proposals to amend Appendices I and II (83 FR 3179) as well as recommendations on resolutions, decisions, and agenda items (83 FR 10736) that the United States might consider submitting for discussion at the next CITES Conference of the Parties (CoP18) scheduled for May 2019. Changes to the CITES Appendices impact how species are regulated under CITES. The public comment period closed for candidate species proposals and resolutions, decisions, and agenda items, March 26th and May 11th, respectively. Comments on candidate species proposals were submitted from groups like the Center for Biological Diversity and Humane Society International for more than 250 plant and animal species including some species native to North America. Input from the States on biological or harvest information for candidate species proposals may be needed. The CITES Technical Work Group will continue to stay engaged with the USFWS in this process and will update the State Fish and Wildlife Agencies as the process moves forward.

Snake Trade and Conservation Management: Traceability

Over the past two cycles of the Conference of the Parties (CoP16 in 2013) the impact of international trade on snake populations has become one of the most aggressively approached issues within CITES. There is no doubt that snake trade, especially in Asia, needs better control measures. The world crocodylian managers, led by the US managers of the American Alligator, are in a good position to advise the development of sustainable mechanisms for snake trade. The model for sustainably managing American Alligators has direct applicability to trade in snake. As a result, the CITES Technical Work Group has been actively involved in inter-sessional work on snake trade and conservation. Two snake proposals that emerged at the 29th Animals Committee (29AC) in 2017 had the potential to undermine the long standing and effective traceability processes for crocodylians. Specifically, Mexico and Italy proposed a tagging system that would have broadened the Treaty's charge on developing snake traceability systems to include all reptiles and would have expanded the tagging requirement beyond the level of tanned whole skins to include traceability to the retail level. The consequences of such a mandate would have been extremely difficult to implement and would have diverted limited CITES enforcement and management resources away from other more critical needs. The CITES Technical Work Group was engaged in the 29AC working group established to deal with these issues and offered multiple interventions in defense of State Fish and Wildlife Agency interests. The outcome was favorable in that the recommendation to the CITES Standing Committee was to draft a decision on traceability systems that was restricted to snakes and that did not extend beyond tanned whole skins. We actively engaged in this issue as part of the inter-sessional working group that was drafting documents for the upcoming 30th Animals Committee meeting. Our goal is to avoid excessive requirements on tracing wildlife products beyond snakes. We continue to collaborate with the Crocodylian Specialist Group and American Fur Resources Council to protect the State's interest as it pertains to this issue.

CITES Appendix III Listings

Individual countries determine whether one of their native species will be listed in Appendix III. Species are listed to help a country gather information on the level of international trade to determine if a CITES Appendix I or II listing or some other action might be needed in the future. At the 29AC meeting in 2017, a recommendation was made that CITES develop a list of species that warrant Appendix III listing. This list would be generated by the broader CITES body rather than be initiated by individual range countries. After extensive debate the Animals Committee rejected the idea of establishing a list of Appendix III species generated outside of individual countries but did establish an inter-sessional Working Group to develop guidance documents to assist countries in how best to utilize the Appendix III listing for their native species. The idea of developing a list of Appendix III species continued to be pushed during the inter-sessional Working Group but was again rejected. Myself, representing the MAFWA, as well as the SEAFWA CITES Technical Work Group representative actively participated in this working group.

CITES 30th Animals Committee Meeting, July 2018

The CITES Technical Work Group will participate in the 30th Animals Committee Meeting and the Joint Session with the 24th Plants Committee in July. At this stage, the meeting agenda has not been finalized but we anticipate continued dialogue and working groups on non-detriment findings; the review of significant trade in Appendix II species; snake trade and traceability; paddlefish and sturgeons; status of Appendix II listed European Eels (*Anguilla spp.*) and a separate study for all non-CITES listed eel species; captive-bred and ranched specimens; tortoises and freshwater turtles; as well as broader discussion items pertinent to both the Animals and Plants Committees like the CITES Strategic Vision and Appendix III listings.

USFWS International Affairs Program Staffing Changes

There were three recent changes within the USFWS International Affairs Program with staff whom we have worked closely with on CITES for a number of years. Craig Hoover left his position as the Chief of Division of Management Authority (DMA) to become the new Chief of the Division of International Conservation, Tim Van Norman retired as Chief of the DMA Branch of Permits, and Bruce Weissgold a biologist in the DMA took early retirement. We are optimistic that their positions will be filled quickly and that we will continue to have a productive working relationship with those who fill their vacancies.

TIME & PLACE OF NEXT MEETING

CITES 30th Animals Committee Meeting, July 2018; Geneva, CH

Respectfully submitted by,

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Midwest Association of Fish and Wildlife Agencies Climate Change Technical Working Committee Report 2018

Meeting Time and Place

The committee met by conference call and WebEx on December 6, 2017.

Attendance

Staff from nine states participated in the call: Leon Hinz IL, Brad Feaster IN, Katy Reeder IA, Chris Hoving MI, Peter Jacobson MN (chair), Rick Schneider NE, Patrick Isakson ND, Eileen Dowd-Stukel SD, Tara Bergeson WI.

In addition, three guests joined the meeting: Mary Ratnaswamy, Director of the USGS Northeast Climate Science Center, Olivia LeDee Associate Director of the USGS Northeast Climate Science Center, Dean Paron MN DNR

Director Action Item

- None required.

Director Information Items

2018 Committee Efforts

A primary focus of the committee this year was following the federal budgeting process for funding the USGS Climate Science Centers (now known as Climate Adaptation Science Centers - CASC). Both the Northeast and North Central CASCs have funded critical research on climate adaptation strategies that have been beneficial to state resource agencies across the Midwest. The recent shuffling of federal budget priorities has put funding for the CSCs at considerable risk. To that end, we invited Mary Ratnaswamy, Director of the Northeast CASC and Olivia LeDee, Associate Director of the Northeast CASC to provide an update on the budget status and other activities at the December meeting. Since the status was highly uncertain at that time, Olivia provided a more recent update and noted that the national program budget was flat (from FY17) in Omnibus Bill and retains eight regional science centers. In addition, there was a name change and they are now referred to as the National and Regional Climate Adaptation Science Centers. They are awaiting their allocation and expect to complete or expand ongoing projects with FY18 funds. They have also entered the last year of the host agreement with the university consortium. An RFP will be released, in summer, for the next phase of a host agreement.

There was also considerable discussion on how state agencies can provide input into research priorities and stakeholder engagements for CASCs. One particularly timely opportunity will be the Center's revision of their Science Plan which will guide priorities for the next three to seven years. The MAFWA Climate Change Committee could be a good avenue for state agencies to be involved in that process. In addition, Chris Hoving, MI DNR, provided an update on his involvement with the North East CASC Science Advisory Committee. Chris replaced Olivia LeDee on the committee and attended his first meeting with the group. He was impressed with the breadth of stakeholders that included tribes and other federal agencies. Chris suggested that there should be a standing agenda item for the NE CASC Science Advisory Committee and the

committee agreed. Recently the North Central CASC has initiated a series of phone interviews with staff in state wildlife agencies in their region to better understand their needs regarding climate change related research/information/products. In each agency, they are interviewing staff from the wildlife division, fisheries division, and natural heritage program or the SWAP coordinator. It is important for MAFWA agencies to continue to provide input into these important science centers.

Dean Paron, Finland Area Fisheries Supervisor with the Minnesota DNR made a presentation on how they are implementing climate adaptation from a local fisheries management perspective. Dean gave an excellent presentation and provided a great example of how implementing at a local-scale is an important end product of our efforts.

And finally, the members continue to see value in the networking opportunities that the committee provides. The updates that each member provides for their respective states continue to be a source of important information for the group. Since climate adaptation capacities within anyone state agency are modest, the interaction on a multi-state level is invaluable for keeping up with issues.

Federal Budget Priorities

1. USGS National and Regional Climate Adaptation Science Centers (formerly Climate Science Centers). These Centers provide critical research results with direct applications for state resource management agencies. Federal budgets sufficient to maintain at least 8 regional CASCs are necessary to support that continued service.
2. U.S. Fish and Wildlife Service, Science Support (including LCC's). This program has produced information (e.g. vulnerability assessments) and partnerships (e.g. aquatic restoration, forest management) to assist managers in responding to climate change.
3. National Fish Habitat Partnership and numerous regional Fish Habitat Partnerships. Several of these partnerships (e.g. the Midwest Glacial Lakes Partnership) are recognizing the effects of climate change on fish habitat and need adequate funding levels.

Coordination

The rotation of the Committee chair normally aligns with the host state of the Directors' meeting. Although North Dakota was the host state, Peter Jacobson, MN DNR, volunteered to chair the Committee for this year. Ohio is scheduled to provide the chair for next year.

Time and Place of the Next Meeting

In 2018-2019, the Committee will meet as needed by conference call.

Appendix 1. Organizational Guidelines

ORGANIZATIONAL GUIDELINES FOR THE MIDWEST ASSOCIATION OF FISH AND WILDLIFE AGENCIES CLIMATE CHANGE TECHNICAL WORKING COMMITTEE

Mission: Advance wildlife and fish conservation in the member states of the Midwest Association of Fish and Wildlife Agencies (MAFWA) by providing a forum to facilitate sharing of climate change adaptation information, strategies, and resources, activity that will result in coordinated fish and wildlife adaptation planning actions and recommendations to MAFWA from the member states.

Objectives:

1. Provide a forum for the discussion of how fish and wildlife agencies are addressing climate change in member states, including how agency staff view the role climate change plays in conservation, and how climate considerations are integrated into agency organizational structure, policy, and planning efforts.
2. Define common priorities, develop coordinated strategies, and seek multi-state grants to address climate change threats to fish and wildlife and their habitats in member states (as identified in their climate adaptation plans, if such plans exist).
3. Stimulate an exchange of information among member states on legislation, administrative rules, adaptation and mitigation activity, education, funding and research related to climate change and fish, wildlife, and habitat.
4. Ensure coordination and cooperation among member states and federal agencies in dealing with programs to address the likely impacts of climate change.
5. Work closely with the Association of Fish and Wildlife Agencies' Climate Change Committee, the Landscape Conservation Cooperatives, and other regional committees, institutions, organizations and groups working to address climate change.
6. Stay up-to-date on climate change issues that impact fish and wildlife and inform/advise the Midwest Association of Wildlife Agency directors on pertinent issues and solutions.

Membership: The membership of the MAFWA Climate Change Technical Working Committee (MAFWA CCC) is open to employees of member states and provinces. Member states will be allowed one vote each, regardless of delegation size. Representatives of federal agencies, research institutions, conservation organizations, and other individuals may be invited to attend Working Group meetings.

Officers: The MAFWA Executive Committee shall appoint a Chair each year. The Chair shall be an employee of a member state agency. The Chair and his/her member agency shall provide clerical support needed for conducting committee business and shall maintain a file of all minutes of committee meetings, correspondence and other items as necessary. The Chair's

responsibility shall include, but not be limited to, organizing a minimum of one MAFWA CCC meeting per year, maintaining committee files, preparing necessary correspondence and preparing a report of all CCC activities for submission to the MAFWA Executive Committee. The MAFWA Executive Committee shall appoint a Vice-Chair. The duties of the Vice-Chair will be to assist the Chair as required, assume the duties of the Chair in the event that the Chair is unable to perform those duties, and to succeed the chair when her/his term is over.

Sub-Committees: Ad-hoc Sub-Committees may be appointed by the Chair to investigate and report on specific issues. Sub-Committees will be appointed by the Chair upon review of requests from members of the Executive Committee for specific Committee action.

Meetings: The MAFWA CCC will meet at least once per year. The meeting may be held in any member state or in conjunction with other regional or national meetings that are timely or to reduce travel costs, or be conducted by conference call or webinar. The schedule and duration of each meeting will be determined by the Chair after consultation with other members of the Working Group. Notice of meeting dates and locations will be made available to members far enough in advance to enable them to secure out-of-state travel authorization for attendance.

Meeting Agenda: The program will be organized to permit adequate time for discussion of agenda items. Each Working Group meeting should include a short (10-minute) report from each state on the status of climate change-related projects in that state. Other topics on the agenda will reflect current issues related to the relationship between climate change, fish and wildlife, and habitat, as well as progress toward meeting the objectives of the Working Group. The Chair may request special reports from states and individuals on current topics. State and special reports will also be submitted in written format to facilitate sharing them with agency directors, maintenance of proper files and provision of reports to other appropriate persons. Guest speakers may be invited to Working Group meetings to make presentations on topics of interest. Short field trips may be arranged in conjunction with the meetings.

Attendance: To enhance an atmosphere of participation and exchange of ideas, attendance from all member states and provinces is strongly encouraged.

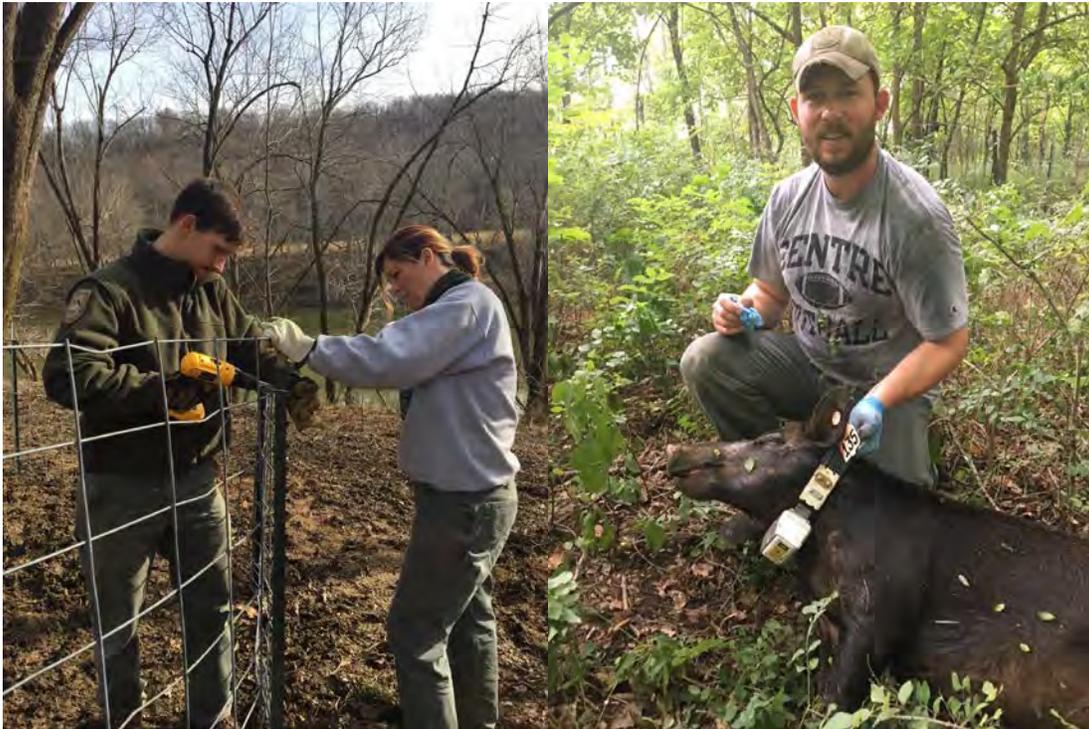
Business Meeting: A formal MAFWA CCC business meeting will be held in conjunction with any Working Group meeting. The business meeting will discuss and determine specific recommendations to the MAFWA Executive Committee. Recommendations to the Executive Committee must represent the majority view of member states/provinces. Each member state with a representative in attendance will be allowed one vote. Invited agencies, private citizens, NGOs and others in attendance are not eligible to vote.

Report: Following any MAFWA CCC meeting, the Chair will prepare a report for the Executive Committee of the MAFWA. The Chair will also send a copy of the report to all members of the Working Group. MAFWA CCC members should brief their own administration immediately following the Working Group meeting. The report shall contain a summary of the information presented at the Working Group meeting, items covered in the business meeting, any recommendations from the Working Group, appropriate handouts obtained at the meeting and

names and address of all attendees. This report shall be submitted to the Executive Committee not less than 30 days before the MAFWA Directors Annual Meeting.

MAFWA Ad-hoc Feral Swine Committee – 2018 Annual Report

Compiled and Submitted by Steven E. Backs, Chr., MAFWA Ad-hoc Feral Swine Committee 5/10/2018



Kyle Sams and Terri Brunjes, KDFWR setting up a corral trap while John Hast, KDFWR, secures a GPS radio to a “Judas” wild pig in Kentucky.

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 policies 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)

Meeting Time and Place: 2018 International Wild Pig Conference, Oklahoma City, Oklahoma, April 15-19, 2018.

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 with 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 with recent developments of potential toxicant delivery systems. There were 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 of 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 Leary (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 meet 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)

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State/Province Status Reports Submitted

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

MAFWA Hunting and Shooting Sports Participation Committee Report

Meeting Time and Place:

Monday, January 29th, 2018; 1-5pm
Tuesday, January 30th, 2018; 9am-4:45pm
Hilton City Center, Milwaukee, Wisconsin

Attendees:

(Appendix A- attendance list)

Illinois-	Jared Duquette, Ryan Conant
Indiana-	Mark Reither, Jack Basiger, Clint Kowalik
Iowa-	Megan Wisecup, Barb Gigar, Rachel Ladd, Jamie Cook
Kansas-	Not represented
Kentucky-	Not represented
Michigan-	Dennis Fox, Steve Sharp, Johanna Dart
Minnesota-	Deborah Beyer, Jeff Ledermann, James Burnham
Missouri-	Not represented
Nebraska-	Michaela Rahe and Jeff Rawlinson
North Dakota-	Not represented
Ohio-	Matt Neumeier
South Dakota-	Not represented
Wisconsin-	Theresa Stabo, Keith Warnke, Emily lehl, John Motoviloff (NWTF), Marty Moses (PF), Bob Holsman, Alanna Koshollek (ALF), Scott Hyingstrom, Peggy Farrell (BOW), Buddy Hufacker (ALF), Ben Beardmore, Brenda Von Rueden, Ashley Van Egtern, Lucas Olson (UW Madison- Badger Hunt Club)
Pheasants Forever National-	Courtney Schaefer and Rich Wissink
USFWS-	Fabian Romero
CAHSS-	Samantha Pedder
RBFF-	Stephanie Hussey
ATA	Dan Forster
RGS	Mark Fouts

There were a couple dozen attendees who came in and out to observe and listen periodically.

Executive Summary:

(Appendix B- agenda)

The MAFWA Hunting and Shooting Sports Participation Committee held its annual meeting during the Midwest Fish and Wildlife Conference, held January 28th through February 1st, 2018 at the Wisconsin Center in downtown Milwaukee, Wisconsin. The MAFWA Committee met the afternoon of Monday, January 29th and continued through Tuesday, January 30th. States and Partner groups had ample opportunities over both days to network, hear about new

innovations and lessons learned, discuss priorities and barriers, provide updates, and offer creative suggestions in terms of the R3 movement going forward.

Monday kicked off at 1:00pm with a brief round of introductions around the room.

New innovation: Emily lehl from Wisconsin DNR, provided a presentation and discussion of modeling retention dynamics in first-time hunters in Wisconsin using mark-recapture surveys. She found that some variables lack explanatory power for understanding variations in hunter participation rates and that not much literature exists to reference in terms of mark-recapture studies of hunters. However, she did conclude that hunters who begin hunting through a department intervention with several trial experiences have a much higher survival rate than those who enter the database as the result of a one-time Learn to Hunt.

Lesson learned: Bob Holsman of Wisconsin DNR presented the results of a 2017 survey of purchasers of Wisconsin's discounted gun-deer hunting license ("first-time buyer" license). The primary objective was to track whether promotion of the program was correlated with increases in customer awareness. A secondary objective was to provide a snapshot into an emerging segment of hunters who are being recruited into the activity as adults ("adult-onset hunters").

Key Study Findings

- 1) First-time deer hunters were the largest segment of discount license buyers during the 2016 gun deer season, but 46% of the customers had previously hunted in Wisconsin or elsewhere.
- 2) Awareness of the discount program remains relatively low at time of purchase; and decreased from 28% to 22% between 2015 and 2016, despite an increase in media promotion leading up to the 2016 gun-deer hunting season.
- 3) Most buyers of the \$5.00 gun-deer hunting license, including those who were aware of the discount prior to their decision to purchase, said they would have purchased a license at the full price (\$24.00) anyway.
- 4) We estimate that the agency lost \$302,122 in revenue to the Fish and Wildlife Account in 2016 from licenses that could have been sold at the full price.
- 5) Eighteen to 29-year-old women make up the largest segment of first-time buyers.
- 6) Among new deer hunters, women were more likely to come from a hunting family than were men, and they were more likely to hunt with family members whereas as new, male hunters tended to hunt with friends.
- 7) A majority of discount license buyers were satisfied with their 2016 deer hunt.
- 8) Approximately, seven in ten discount buyers said they had already purchased the next season's hunting license or intended to purchase it.
- 9) The most influential determinant in recruiting new adult participants was an invitation from an existing hunter.

New innovation: In 2016, the Recreational Boating & Fishing Foundation partnered with the State of Georgia to run a campaign to assess the effect of email communication on retention of new anglers. Using the pilot program as inspiration, Wisconsin DNR ran a similar campaign targeting first-time buyers and lapsed deer hunting license purchasers in the fall of 2017. Ben Beardmore explained how 3 treatment groups received 4 separate email reminders timed out well in advance of the 9-day gun deer season. Based on the data analysis, looking at things such

as delivery confirmation, open message rates and licenses purchased it was determined that the maximum effect of this type of messaging is most effective on groups of hunters that had short lapses in their license purchasing history, were male, and were younger than average hunters. The effect was not large (4-8%), but it was significant and email outreach is very inexpensive. WDNR will continue to refine and use this tool in spring 2018 for anglers and again in fall 2018.

Strategic adaptation: Lucas Olson, President of the University of Wisconsin-Madison Badger Hunting Club, discussed some R3 efforts and challenges at a College level. State agencies and partner groups should consider seeking out student organizations at local campuses as there is already a social atmosphere, an interest in hunting and food, diversity and nearly 40% of young adults attend college. Badger Hunting Club considers it their mission to foster a hunting culture on campus while changing perceptions and raising conservation awareness through activities that connect students, share local knowledge, and provide gear and land access to those lacking such resources. The group also hosts several Annual Events to help them achieve their R3 goals. Such events are: Club socials, Trap Shoot Tournament, Mississippi River Duck Trip, and Conservation lecture series. Some challenges that Lucas brought to light are access to vehicles, firearms and gear, turnover, competition amongst other student organizations and funding.

Fabian Romero provided a Region 3 R3 update to the room. The total excise taxes collected in 2017 and available for use in 2018 is \$805.9M compared to \$780M the previous year. While hunter numbers have been on the decline, angler numbers have seen an increase. Six states in the Region 3 area are currently utilizing step down efforts of the National R3 plan. More Region 3 states are submitting more R3 activities and projects as part of their grant packages. 7 out of 8 states currently have or are in the process of hiring R3 coordinators. Region 3 has a Midwest Outdoor Access Initiative going which is a step down effort of Secretary Order 3356. The initiative establishes 3 teams which will coordinate with states and other partners to support outdoor recreation efforts and increase support for recreation access. Fabian took the time to highlight some R3 projects going on throughout Region 3 which can be read in more detail in the State and Partner reports (Appendix D- State and Partner Reports).

National R3 Symposium update from Samantha Pedder of CAHSS. The Symposium will take place May 21-23 in Lincoln, Nebraska.

Jack Basiger of Indiana lead a group discussion on National Conservation Needs priorities in which the group made recommendations on modifications. (Appendix C- NCN doc)

New innovation: Minnesota took the floor and presented some information in terms of Multicultural R3 outreach efforts. Deborah Beyer of Minnesota DNR, highlighted the partnership between MNDNR's Division of Fish and Wildlife (FAW) and Division of Parks and Trails (PAT) to place nine interns around the state in the summer of 2017. The interns provided 306 aquatic or fishing education programs with 9395 participants. Seventeen programs were two-hour "I Can Fish!" clinics in which participants were asked to pre-register and completed a comprehensive evaluation. The survey results had a positive response rate (89%) in which 44%

of the participants were of color and respondents came overwhelmingly from urban areas. 86% agreed or strongly agreed that, “This program prepared me to go fishing on my own.” Some other outreach activities that MNDNR has developed include advisors and potential partners from Latino and Hmong communities, hiring bilingual MinnAqua Interns at Fort Snelling State Park with a focus of programming to Latino communities and allocating funds for SE Asian communities to increase fishing opportunities.

New innovation: Cortney Schaefer of Pheasants Forever National, facilitated a group discussion on “Awakening the Orange Army” and why a nationally recognized mentor certification program, in partnership with IHEA-USA, fits within the primary strategies of the National Hunting and Shooting Sports Action Plan. More and more students are opting to receive their Hunter Education certification from online courses which can lack an in-person component. Students need multiple face-to-face interactions to truly develop and self-identify as a “hunter.” A national Mentor certification program would create a national database helping connect new hunters with a certified mentor in their area. Those interested in becoming a certified mentor would apply, pay a \$30-\$45 application fee (which covers an IHEA-USA Membership and state background check), attend a one-day training, and submit annual reports on their mentees, successes, and areas of improvement. A successful mentor will have taken at least one novice hunter out on at least 3 separate “outings” over the course of a year. Benefits to becoming a certified mentor include liability insurance of up to a \$1,000,000 as well as discounts on over 200 hunting brands. The official Hunter Mentor Certification Program is expected to rollout in the spring of 2018.

Lesson Learned: Jeff Ledermann, of Minnesota DNR presented results, challenges and lessons learned with Angler and Hunter R3 grants in the state of Minnesota. To date there has been 3 rounds of funding from legislative-directed appropriation for R3 activities from State Game and Fish fund. Round 1 was in the Spring of 2016 with \$200,000 awarded to 12 projects. Round 2 was the fall of 2016 with \$111,000 awarded to 11 projects, and Round 3, in the winter of 2017 has awarded \$169,000 to 12 projects. There may be a Round 4 in the Summer of 2018 but that is unknown. All Round 1 projects have been completed, Rounds 2 and 3 project deadlines are June 30, 2018. Some challenges and lessons learned were that reporting is often variable and lacking, there has to be more outreach to inform, support and guide applicants, and there has to be an acceptance of risk/project failure.

New Innovation: Jared Duquette highlighted how R3 science is used to guide R3 programs within the Illinois DNR using population dynamics such as habitat, survival, reproduction and demographic differences in conjunction with data collected from adults, all demographics and license buyers, states can predict future trends of their programs.

Update: In the 2017 Special Report on Fishing it was found that 885 million total fishing trips were taken in 2016, 2.5 million people were new fishing participants and that there was an 11% increase in the number of Hispanics that participated in fishing. Fishing is currently at it’s highest participation number since 1991. Coincidentally, in that same year, 17 million people were first-time boating participants and 32% of those first-timers were of Hispanic background.

The Recreational Boating and Fishing Foundation (RBFF) has recognized how important fishing and boating can be when used together for Angler R3. Stephanie Hussey explained how RBFF has developed some resources for state agencies that include overall R3 planning considerations, marketing planning aspects, worksheets to assess current R3 efforts and an Angler R3 Coordinator/Manager Position Description template. RBFF is currently planning partnerships with 8+ states and their vision is to establish an Angler R3 coordinator in every state which integrates their R3 strategic plan including marketing components. They hope to achieve this goal by helping states work with Association of Fish and Wildlife agencies, industry and the Council to Advance Hunting and Shooting sports on generating R3 strategic plans, assisting states with integration of marketing, developing continuing education for R3, customer service and marketing, and coordinating with AFWA, industry, and CAHSS to keep up R3 momentum.

The meeting was adjourned.

(Appendix D- State and Partner R3 Reports).

This R3 committee meeting was an improvement over past meetings and really reflects the growth of the movement around the nation. We expect further growth and meeting effectiveness as R3 strategies and tools are developed and implemented.

Director Action Items:

Director Information Items:

Time and Place of next meeting:

The MAFWA R3 committee has decided to hold its next meeting combined with the WAFWA R3 committee in Tucson AZ next January.

Appendices:

Appendix A: [Attendance List](#)



MAFWA Hunter
and Angler R3 Comr

Appendix B: [Agenda](#)



Agenda MAFWA R3
2018 (002).pdf

Appendix C: [National Conservation Needs](#)



2018 MSCGP
Priority NCN 9.docx

Appendix D: [State and Partner Reports](#)



State and Partner
Reports Combined.pdf



2017 MIDWEST 
DEER & WILD TURKEY
STUDY GROUP MEETING



2017 Proceedings
Midwest Deer & Wild Turkey Study Group Meeting
August 28–31, 2017
Moravia, Iowa

41st Annual

2017 MIDWEST 
DEER & WILD TURKEY
STUDY GROUP MEETING

Submitted by:

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December 2017

Cover design: Kati Bainter, Iowa Department of Natural Resources



Table of Contents

Background	1
Meeting Time and Place	1
Attendance	1
Executive Summary	2
Business Meeting	3
Table 1: List of Participants	5
Table 2: Previous Midwest Deer & Wild Turkey Study Group Meeting Locations	7
2017 Midwest Deer & Wild Turkey Study Group Meeting Agenda	8
APPENDICES	25
2017 Midwest Deer & Wild Turkey Study Group State Deer Reports	25
Illinois	26
Indiana	33
Iowa	44
Kansas	57
Kentucky	69
Michigan	84
Minnesota	93
Missouri	103
Nebraska	113
North Dakota	120
Ohio	143
Ontario	154
Wisconsin	162
2017 Midwest Deer & Wild Turkey Study Group State Wild Turkey Reports	173
Illinois	174
Indiana	183
Iowa	194
Kansas	202
Kentucky	209
Michigan	216
Minnesota	277
Missouri	288
Nebraska	300
North Dakota	308
Ohio	319
Ontario	326
South Dakota	331
Wisconsin	338

Background

The Midwest Deer and Wild Turkey Study Group (MDWTSG) meeting is an annual gathering of wildlife managers sanctioned by and affiliated with the Midwest Association of Fish and Wildlife Agencies. Primary objectives of the meeting include dissemination of deer and wild turkey management strategies, discussion of emerging or existing issues associated with deer and wild turkey management, and coordination of regional deer and wild turkey management or research efforts. The meeting location rotates among the Midwestern states that are active within the group.

Forums such as the MDWTSG meeting provide valuable opportunities for state deer and turkey biologists to become acquainted with emerging issues and exchange information and ideas related to deer and turkey research and management. The need for state fish and wildlife agencies to establish and maintain deer and turkey biologist positions and support travel of these biologists to the annual MDWTSG meeting is imperative for exchanging information to promote quality wildlife management and research in each state. It is more important than ever that state agencies are at the forefront of issues related to deer and turkey management in order to protect the heritage and recreational opportunities of hunting for future sportsmen and sportswomen.

Meeting Time and Place

The Iowa Department of Natural Resources (DNR) hosted the 2017 MDWTSG meeting at Honey Creek Resort State Park at Lake Rathbun in Moravia, Iowa on August 28–31. The MDWTSG appreciates the financial support provided by the National Wild Turkey Federation (NWTF) and the Quality Deer Management Association (QDMA), as well as the various sponsors which provided donations for the event including (in alphabetical order) Bass Pro Shop, Bee Mindful, Boyt Harness Company; Cookies Food Products, Inc.; Custom Cutlery and Ironworks, Custom Jig and Spins, Eagle Optics, Fareway Economical Food Stores (#3861), G&L Clothing, Gary Plastic Packaging Corporation, Griebel Game Calls, Hunter Specialties, Lola's Fine Hot Sauce, Mill Creek Trapping Supply, Mountain Man Game Calls, Palmer Candy Company, Peace Tree Brewing, Pure Fishing – Berkley, Rada Cutlery, Scheels, Simply Soothing; Skulls Unlimited, Int.; Sleepy Creek Tannery, Sportsman's Warehouse, Tableboards by Spinella, and Vortex Optics.

Attendance

The 2017 meeting was attended, in total, by 49 participants and speakers, including state deer and/or wild turkey biologists from 12 Midwest member states (Indiana, Iowa, Illinois, Kansas,

Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin), and biologists and researchers from the NWTF, QDMA, US Fish and Wildlife Service, US Department of Agriculture Animal and Plant Health Inspection Service, Iowa State University, South Dakota State University, and Michigan State University.

Executive Summary

Attendees at the 2017 MDWTSG meeting were welcomed by Dr. Dale Garner, Division Administrator, Conservation and Recreation Division, Iowa Department of Natural Resources. Following the meeting introduction, there were seven presentations during the joint session, including the following topics:

- Resource selection function modeling
- Occupancy modeling
- Deer fawn space use in Iowa
- Deer fawn survival in the Northern Great Plains
- Bison and elk management at Neil Smith National Wildlife Refuge
- Deer population genetics in Iowa
- Deer antler characteristics in Iowa

The joint session continued with presentations and joint-group discussion on selected topics, including the following:

- Urban wildlife management
 - Iowa wildlife depredation program
- Disease
 - Iowa chronic wasting disease management
 - Avian influenza surveillance and emergency response
- Surveys
 - Declines in survey response rates and approaches for improvement
- Technology in natural resources
 - ESRI ArcCollector app on Android Devices
 - ESRI Survey 123 app for ArcGIS

On day two, the joint session continued with presentations and joint-group discussion on topics related to population management and dynamics, including the following:

- Female wild turkey habitat selection
- Deer reproduction and condition
- Estimating deer density and fecundity

- Survival and reproduction of wild turkey
- Implementing state-space and integrated population models

Subsequently, the deer and wild turkey break-out sessions occurred, including discussion on the following:

- Wild Turkey Study Group
 - Past, present, and future of the NWTF
 - Wild turkey impacts on other species
 - Midwest Wild Turkey Consortium research
 - Michigan State University will provide the consortium a proposal for updating state hunter harvest surveys to collect per-unit-effort data
 - Michigan State University will provide the consortium with a cost-benefit analysis for updating the wild turkey habitat analysis using a recently updated national land cover dataset
 - Standardizing state wild turkey brood surveys in the Midwest
 - The Group agreed to work towards standardizing wild turkey brood surveys across Midwestern states
 - Missouri will provide the group with protocols used to standardize brood surveys across Southeastern states
 - Missouri will compile current survey protocols for Midwestern states to evaluate methods for standardizing brood surveys
- Deer Study Group
 - Trends in buck harvest age structure
 - Wisconsin deer metric system
 - Data sharing with stakeholders
 - State approaches to feeding and baiting
 - Unusual deer behavior associated with Epizootic Hemorrhagic Disease in Kentucky
 - Regulating hunting licenses for guides and outfitters
 - Drivers and decision making processes for implementing deer management programs among states
 - Ohio will initiate contact with and compile information from MDWTSG state representatives

Business Meeting

The business meeting was conducted as a joint session involving both deer and wild turkey program leaders. The 2018 MDWTSG meeting will be hosted by the Minnesota Department of Natural Resources.

The group discussed the MDWTSG meeting guidelines as requested by Adam Murkowski, Minnesota Department of Natural Resources. A resolution was passed to allow A. Murkowski to explore possible changes to the guidelines as related to the ability of group members to openly disseminate information and facilitate open discussion during annual meetings. A. Murkowski agreed to revisit the guidelines of interest and provide the Study Group's deer and turkey program leaders with a list of potential edits and changes by March, 2018. The group will review the proposal at the 2018 MDWTSG meeting.

The Study Group discussed adding additional cervid species to the list of species under purview of the MDWTSG. Some Midwestern states currently have elk (*Cervus canadensis*) management programs which do not fall under the guidelines of the MDWTSG or other regional working group. The Midwest Association of Fish and Wildlife Agencies Director Liaison to the MDWTSG indicated that the Study Group does not need to change the Group's existing guidelines to discuss topics involving cervid species other than deer. The Study Group has authority under currently guidelines to decide whether other cervid species will be considered by the MDWTSG without submitting a formal resolution to the state Directors. The MDWTSG consensus was that the inclusion of cervid topics other than deer at any annual MDWTSG meeting should be left up to the hosting state and determined on a case-by-case basis. No formal proposal or resolution was submitted on this topic.

Table 1. List of participants: 2017 Midwest Deer & Wild Turkey Study Group meeting, Moravia, Iowa.

First Name	Last Name	Agency	Email	Phone
Luke	Garver	Illinois Department of Natural Resources	Luke.garver@illinois.gov	217-782-4377
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Joe	Caudell	Indiana Department of Natural Resources	jcaudell@dnr.in.gov	812-822-3300
Todd	Bogenschutz	Iowa Department of Natural Resources	todd.bogenschutz@dnr.iowa.gov	515-432-2823
Bill	Bunger	Iowa Department of Natural Resources	william.bunger@dnr.iowa.gov	515-975-8318
James	Coffey	Iowa Department of Natural Resources	james.coffey@dnr.iowa.gov	641-774-2958
Chris	Ensminger	Iowa Department of Natural Resources	chris.ensminger@dnr.iowa.gov	515-725-8499
Dale	Garner	Iowa Department of Natural Resources	dale.garner@dnr.iowa.gov	515-725-8494
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Tyler	Harms	Iowa Department of Natural Resources	tyler.harms@dnr.iowa.gov	515-432-2823
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Levi	Jaster	Kansas Department of Wildlife, Parks & Tourism	levi.jaster@ks.gov	620-342-0658
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Joanne	Crawford	Michigan State University	crawford.joanne@gmail.com	517-432-0804
Brian	Haroldson	Minnesota Department of Natural Resources	brian.haroldson@state.mn.us	507-642-8478
Lindsey	Messinger	Minnesota Department of Natural Resources	lindsey.messinger@state.mn.us	507-642-8478
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Table 1 (Continued). List of participants: 2017 Midwest Deer & Wild Turkey Study Group meeting, Moravia, Iowa.

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Kevin	Wallenfang	Wisconsin Department of Natural Resources	kevin.wallenfang@wisconsin.gov	608-261-7589

Table 2. Previous Midwest Deer & Wild Turkey Study Group meeting locations.

Year	State	Location	Date
1977	Missouri	Missouri Fountain Grove Wildlife Area	January 17-19
1978	Wisconsin	Wisconsin Wyalusing State Park	January 16-17
1979	Iowa	Iowa Rathburn Fish Hatchery	January 15-18
1980	Minnesota	Minnesota Whitewater State Park	January 21-24
1981	Indiana	Indiana Harrison-Crawford State Park	January 19-22
1982	Ohio	Ohio Lake Hope State Park	January 18-21
1983	Nebraska	Nebraska Louisville 4-H Camp	January 17-21
1984	Kansas	Kansas Camp Aldrich	January 16-19
1985	South	South Dakota Black Hills	May 7-10
1986	North	North Dakota Camp-of-the-Cross	January 20-23
1987	Michigan	Michigan Kellogg Biological Station	January 27-29
1988	Illinois	Illinois Touch of Nature	February 1-4
1989	Missouri	Missouri YMCA Camp of the Ozarks	January 23-26
1990	Wisconsin	Wisconsin Bethel Horizons Prairie Center	January 15-18
1991	Iowa	Iowa Conservation Education Center	January 14-17
1992	Minnesota	Minnesota Whitewater State Park	January 13-16
1993	Indiana	Indiana Harrison-Crawford State Park	January 11-14
1994	Ohio	Ohio Canter's Cave 4-H Park	January 30-February 2
1995	Nebraska	Nebraska Mahoney State Park	January 15-18
1996	Kansas	Kansas Camp Pecusa	January 14-16
1997	South	South Dakota Camp NeSoDak	August 24-27
1998	North	North Dakota Camp Grafton	August 9-12
1999	Ontario	Ontario Blue Springs Scout Reserve	August 15-18
2000	Michigan	Michigan Thunder Bay Resort	August 20-23
2001	Illinois	Illinois Dixon Springs Ag. Station	August 19-22
2002	Missouri	Missouri Conception Abbey	August 18-21
2003	Wisconsin	Wisconsin Bethel Horizons Prairie Center	August 24-27
2004	Iowa	Iowa Conservation Education Center	August 22-25
2005	Minnesota	Minnesota Eagle Bluff Envir. Learning Center	August 21-24
2006	Indiana	Indiana Camp Ransburg, BSA	August 20-23
2007	Ohio	Ohio Canter's Cave 4-H Park	August 19-22
2008	Nebraska	Nebraska Fort Robinson State Park	September 14-17
2009	Kansas	Kansas Rock Springs 4-H Camp	September 14-17
2010	North	North Dakota Camp Grafton	August 22-25
2011	Michigan	Michigan Ralph A. MacMullen Center	September 25-28
2012	South	South Dakota Custer State Park	October 16-19
2013	Illinois	Illinois Allerton Park	August 18-21
2014	Missouri	Missouri YMCA Camp of the Ozarks	September 9-12
2015	Wisconsin	Wisconsin Perlstein Conference Center	September 8-11
2016	Kentucky	General Butler State Resort Park	August 22-25
2017	Iowa	Honey Creek State Park Resort	August 28-31

2017 MIDWEST DEER & WILD TURKEY STUDY GROUP MEETING

9:20-9:40 am **Weather and Landscape Factors Influence White-tailed Deer Fawn Survival in the Northern Great Plains**
Eric S. Michel, Department of Natural Resource Management, South Dakota State University

9:40-10:00 am Break

10:00-10:20 am **Bison and Elk Management in a Prairie Reconstruction at Neal Smith National Wildlife Refuge**
Karen Viste-Sparkman, U.S. Fish and Wildlife Service

10:20-10:40 am **Population Genetic Structure of White-tailed Deer in Iowa**
Julie Blanchong, Department of Natural Resource Ecology & Management, Iowa State University

10:40-11:00 am **Factors Associated with Variation in Antler Characteristics in Iowa Deer**
Dan Adams, Department of Natural Resource Ecology & Management, Iowa State University

1.2. Joint Meeting and Presentations

11:00-11:20 am **Iowa Depredation Program: Urban Perspective**
Bill Bunger, Iowa Department of Natural Resources

11:20-12:00 pm *Group discussion – Urban wildlife management*

12:00-1:00 pm Lunch Conference Room C

1.3. Joint Meeting and Presentations

1:00-1:20 pm **Iowa CWD Issues and Management: Deer and People**
Terry Haindfield, Iowa Department of Natural Resources

1:20-1:40 pm **Avian Influenza Surveillance and Emergency Response**
David Marks, USDA Wildlife Services

1:40-2:20 pm *Group discussion – Disease*

1.4. Joint Meeting and Presentations

2:20-2:40 pm **Survey Response Rate Decline and Possible Approaches for Improvement**
Steve Roberts & Jan Larson, Center for Survey Statistics and Methodology, Iowa State University

2:40-3:20 pm *Group discussion – Surveys and response rates*

2017 MIDWEST DEER & WILD TURKEY STUDY GROUP MEETING

3:20-3:40 pm Break

1.5. Joint Meeting and Presentations

3:40-4:00 pm **Use of ESRI Arc Collector App on Android Devices for Wildlife Surveys**
Todd Bogenschutz, Iowa Department of Natural Resources

4:00-4:20 pm **A New Mobile App for Collecting Roadside Fawn: Doe Observation Data**
Dan Storm, Wisconsin Department of Natural Resources

4:20-5:00 pm *Group discussion – Technology*

6:30-7:30 pm Dinner Conference Room C

7:30-midnight Evening social Rathbun Lakeshore Grille Bar (in Honey Creek Resort)

Wednesday – August 30, 2017

7:00-7:45 am Breakfast (included) Conference Room C

2.1. Joint Meeting and Presentations Conference Room C

8:00-8:20 am **Female Wild Turkey Habitat Selection in Forest-Agricultural Landscapes of Wisconsin**
Chris Pollentier, Wisconsin Department of Natural Resources

8:20-8:40 am **Wisconsin Deer Reproduction and Condition Study**
Dan Storm, Wisconsin Department of Natural Resources

8:40-9:00 am **Estimating Density and Evaluating Fecundity of White-tailed Deer in Iowa**
Tyler Harms, Iowa Department of Natural Resources

9:00-9:20 am **Survival and Reproductive Ecology of Eastern Wild Turkeys in Northern Missouri**
Jason Isabelle, Missouri Department of Conservation

9:20-9:40am **A Framework for Implementing State-space and Integrated Population Models**
Andrew Norton, Minnesota Department of Natural Resources

9:40-10:00 am *Group discussion – population research and modeling*

10:00-10:15 am Break

2017 MIDWEST DEER & WILD TURKEY STUDY GROUP MEETING

2.2. Joint Meeting and Presentations

Conference Room C

- 10:15-10:45am **From Coal Mines to Jack Pines, Wisconsin's Elk Reintroduction Program**
Kevin Wallenfang, Wisconsin Department of Natural Resources
- 10:45-11:00 am **Minnesota Deer Planning Process**
Adam Murkowski, Minnesota Department of Natural Resources
- 11:00-11:20 am **Wisconsin Buck-CWD-Predation Study**
Dan Storm, Wisconsin Department of Natural Resources
- 11:20-11:40 am **Influences of Translocation on Contemporary Patterns of Mitochondrial DNA Diversity and Distribution in White-tailed Deer Across Their Range**
Lynne Gardner, Department of Natural Resource Ecology & Management, Iowa State University
- 11:40-12:00 pm *Group discussion – regional research questions and ideas*
- 12:00-1:00 pm Lunch

Conference Room C

2.3. Break-out Meetings – White-tailed Deer (times flexible to ensure full discussion)

Conference Room C

- 1:00-1:40 pm **State of the White-tail: Trends in Buck Harvest Age Structure**
Kip Adams, Quality Deer Management Association
**Including time for additional discussion and Q&A*
- 1:40-2:00 pm **Show 'em What You've Got, Wisconsin's New Deer Metrics System**
Kevin Wallenfang, Wisconsin Department of Natural Resources
- 2:00-4:00 pm Roundtable discussion and state updates

2.4. Break-out Meetings – Wild Turkey (times flexible to ensure full discussion)

Conference Room E

- 1:00-1:30pm **Past, Present, & Future of the NWTF**
Jason Lupardus, National Wild Turkey Federation
**Including time for additional discussion and Q&A*
- 1:30-2:00 pm **Do Wild Turkeys Impact Other Game Birds?**
Rick Horton, National Wild Turkey Federation (lead discussion)

2017 MIDWEST DEER & WILD TURKEY STUDY GROUP MEETING

2:00-2:30pm	Midwest Wild Turkey Consortium Research: Update and Plans for Future Research Joanne Crawford, Quantitative Wildlife Center, Michigan State University	
2:30-3:00 pm	Standardizing Wild Turkey Brood Surveys across the Southeastern United States Jason Isabelle, Missouri Department of Conservation (lead discussion)	
3:00-4:00 pm	Roundtable discussion and state updates	
Joint Business Meeting and Discussion		Conference Room C
4:00-4:10 pm	Short break/reconvene large group	
4:10-5:00 pm	Business Meeting <ul style="list-style-type: none">▪ MDWTSG guidelines – Adam Murkowski, Minnesota Department of Natural Resources▪ Additional roundtable discussion▪ Resolutions	
5:00-5:20 pm	Closing	
6:30-7:30 pm	Dinner	Conference Room C
7:30-midnight	Evening social	Rathbun Lakeshore Grille Bar (in Honey Creek Resort)

Thursday – August 31, 2017

- Departure
 - Breakfast on your own
-

**MIDWEST FURBEARER GROUP
ANNUAL REPORT
MAY 2018**

MEETING TIME AND PLACE

The North Dakota Game and Fish Department hosted the Midwest Furbearer Workshop May 14-17, 2018. The meeting was held in Medora, ND at the Rough Rider Conference Center. The field tour was of Theodore Roosevelt National Park South Unit.

ATTENDANCE

Fifty one (51) participants attended the workshop in 2018, including state furbearer biologists from 11 Midwest member states and provinces (Illinois, Indiana, Iowa, Kansas, Kentucky, Manitoba, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin) plus Oklahoma and Montana. Additional attendees included persons from Delta Waterfowl Foundation, Fur Takers of America, Iowa State University, North Dakota Fur Takers, South Dakota School of Mines and Technology, South Dakota State University, Three Affiliated Tribes Fish and Wildlife, University of Nebraska-Lincoln, University of North Dakota, University of Wyoming, and USDA-APHIS-Wildlife Services. A complete list of attendees and contact information for state furbearer biologists is available in Appendices 1 and 2.

The Furbearer Committee welcomed one new Midwest state furbearer biologist to this year's workshop – Stan McTaggart (Illinois Dept. of Natural Resources).

EXECUTIVE SUMMARY

Forums such as the Midwest Furbearer Workshop provide valuable opportunities for state furbearer biologists to become acquainted with emerging issues and exchange information and ideas related to furbearer research and management. As such, the need for state fish and wildlife agencies to establish/maintain furbearer biologist positions and support travel of furbearer biologists to the annual Midwest Furbearer Workshop is imperative to promote quality furbearer management and research in each state. It is more important than ever that state agencies are in the forefront of issues related to furbearer management and regulated trapping in order to ensure abundant populations, address important conflicts, and provide sustainable recreational opportunity.

At the 2018 meeting, numerous speakers presented information on topics related to harvest surveys, population modeling, and furbearer management, ecology, genetics, and trapping. Professional presentations were given on the following topics:

- Furbearer management, harvest surveys, and population modeling
- River otter habitat use and population trends in Iowa
- Wolverine harvest analyses in Manitoba
- Predicting abundance of wolves in Montana
- Wolverine distribution and genetics
- Spotted skunk genetics
- Movements and habitat use of urban striped skunks
- Distribution of swift fox in the Dakotas
- Muskrat surveys using UAVs and thermal imaging
- History of predator control in the West
- Delta Waterfowl's predator management program
- Best management practices for regulated trapping
- Wolf management and live capturing
- Black bear monitoring, research and response in Missouri
- Wolf management in Wisconsin
- North Dakota Cooperative Fur Harvester Education Program

As usual, the breaks, evening hours, and business meeting also allowed much exchange of information on current results from population and harvest surveys, current challenges and issues in furbearer management within each state, and an opportunity to discuss new or proposed research projects. The workshop provided a good venue for discussing new ideas or issues that affect multiple state agencies. Summaries of these topics are presented below as Director Action or Information Items.

DIRECTOR ACTION ITEMS

None

DIRECTOR INFORMATION ITEMS

1. Wolf-dog hybrids - In recent years, wolf-dog hybrids have been documented in a number of states. Wolf-dog hybrids are just that, a cross-breeding between captive wolves and domestic dogs resulting in some incredibly wolf-like pets. Some of these hybrids look so much like wolves, that only genetic testing can reveal whether or not it is a true wolf or a hybrid. The group discussed the availability of and potential biases associated with labs that could do this type of genetic testing.
2. Trapper effort data collection - At last year's workshop the group discussed the importance of collecting data annually on trapper effort (no. traps X no. trap nights = effort). This information is comparatively cheap to obtain and can be extremely useful as a population index, is required as an input into SPR models for estimating abundance, and subsumes many variables (e.g., fur prices, gas prices, unemployment) that can influence harvest in sometimes complicated or interactive ways. Some states have been collecting trapper

effort data, while other states have not. The group agreed that more effort should be made to collect trapper effort data, and more discussion is needed to ensure that effort data are obtained in similar manners across jurisdictions, thereby facilitating regional analyses of population trends. As such, several sessions at this year's workshop focused on the importance of harvest and effort data in monitoring population trends, understanding the limitations of those trends, using harvest and effort data with new modeling techniques to estimate abundance, and structured decision making after the data has been collected. Additionally, a summary of the states' monitoring programs for furbearers was provided.

3. Trapping reciprocity - Most states allow nonresident fur trappers, with the exception of Minnesota. As such, most states have reciprocity with one another by allowing nonresidents to trap within their state, as long as their residents have opportunity to go to that state to trap furbearers. It should be noted however, that reciprocity does not mean nonresident trappers are allowed the exact same opportunities as resident trappers in many cases. Trappers and their associations are divided on the issue of whether or not they are in favor of allowing nonresident trappers within their state. The presence or absence of nonresident trappers typically has no effect on furbearer population trends. As such, this issue is a social one about fairness between competing groups of trappers. The group agreed that it is important to maintain and promote regulated trapping, regardless of whether people are residents or nonresidents, because regulated trapping is an integral component to furbearer management.
4. Recommendations for AFWA's Furbearer Technical Committee - The Technical Committee would like to have each regional work group discuss and provide formal recommendations each year as to what they would like to see the Technical Committee focus on in upcoming years. Suggestions from the group included selectivity of push-pull dog-proof traps and the continued research into effectiveness of recess and cubby regulations for body-grip traps in preventing non-target captures.
5. Large carnivore report - The group will continue to annually update the Directors on changes in large carnivore management in the Midwest via Appendix 5.

The Midwest Furbearer Working Group thanks state Directors for their continued support of travel of state furbearer biologists to the annual Midwest Furbearer Resources Workshop. With tight budgets and restricted travel this annual workshop continues to be a critical component of sound resource management in the Midwest. Annual meetings allow for an open, thorough exchange of information and knowledge resulting in efficient, effective, and sound management of these unique species.

TIME AND PLACE OF NEXT MEETING

The Oklahoma Department of Wildlife Conservation will host the 2019 Midwest Furbearer Workshop, which will be a joint meeting with the Southeast Furbearer Work Group. The objective of the joint meeting is to share information among regions. An exact time and location is yet to be determined. A complete list of previous host states is available in Appendix 4.

APPENDICES

Appendix 1. 2018 Midwest Furbearer Workshop Attendees..... 5
Appendix 2. Midwest Furbearer Biologists – Contact Information..... 7
Appendix 3. 2018 Midwest Furbearer Workshop - Agenda..... 10
Appendix 4. Host States of Midwest Furbearer Workshops.....13
Appendix 5. Large Carnivore Sub-committee Status Report.....14

APPENDIX 1. LIST OF THE ATTENDEES AT THE MIDWEST FURBEARER WORKSHOP IN MEDORA, NORTH DAKOTA, MAY 14-17, 2018.

Last Name	First Name	Affiliation
Albers	Gerianne	Indiana Department of Natural Resources
Anderson	Casey	North Dakota Game & Fish Department
Bell	Zachariah	University of Wyoming
Berezanski	Dean	Manitoba Wildlife & Fisheries Branch
Bornsen	Nat	USDA-APHIS-Wildlife Services
Buxton	Mike	Delta Waterfowl Foundation
Cieslak	Sheldon	North Dakota Fur Takers
Conlee	Laura	Missouri Department of Conservation
Davis	Jerrold	Oklahoma Department of Wildlife Conservation
DeVille	Michael	Three Affiliated Tribes Fish & Wildlife
Duckwitz	Jeremy	USDA-APHIS-Wildlife Services
Erb	John	Minnesota Department of Natural Resources
Evelsizer	Vince	Iowa Department of Natural Resources
Evens	Scott	North Dakota Fur Takers
Gates	Emily	Wyoming Game & Fish Department
Gigliotti	Larry	South Dakota Cooperative Fish & Wildlife Research Unit
Hart	John	USDA-APHIS-Wildlife Services
Hastings	Dave	Fur Takers of America
Hiller	Tim	Wildlife Ecology Institute
Inman	Bob	Montana Fish, Wildlife & Parks
Isakson	Patrick	North Dakota Game & Fish Department
Janzen	Dean	USDA-APHIS-Wildlife Services
Jepson	Gary	Fur Takers of America
Jones	Wade	USDA-APHIS-Wildlife Services
Klaver	Robert	Iowa Cooperative Fish & Wildlife Research Unit
Long	Jeff	North Dakota Game & Fish Department
Mastrangelo	Phil	USDA-APHIS-Wildlife Services
McTaggart	Stan	Illinois Department of Natural Resources
Mitchell	Emily	South Dakota State University
Monti	Mark	USDA-APHIS-Wildlife Services
Nixon	Bridget	Iowa State University
Palmer	Laura	Kentucky Department of Fish & Wildlife Resources
Parent	Chad	North Dakota Game & Fish Department
Paulson	John	USDA-APHIS-Wildlife Services
Peek	Matt	Kansas Department of Wildlife, Parks & Tourism
Podruzny	Kevin	Montana Fish, Wildlife & Parks
Powers	Ryan	USDA-APHIS-Wildlife Services

Riotto	Bobbi	University of Wyoming
Rosler	Shawn	Wisconsin Department of Natural Resources
Ryckman	Mason	North Dakota Game & Fish Department
Schneider	Anna	University of North Dakota
Smith	Antoine	Three Affiliated Tribes Fish & Wildlife
Steinwand	Terry	North Dakota Game & Fish Department
Steuber	John	USDA-APHIS-Wildlife Services
Tidwell	Dalin	USDA-APHIS-Wildlife Services
Tucker	Stephanie	North Dakota Game & Fish Department
Tyre	Drew	University of Nebraska-Lincoln
Van Nuys	Frank	South Dakota School of Mines & Technology
Williams	Jeb	North Dakota Game & Fish Department
Wilson	Sam	Nebraska Game & Parks Commission
Wiseman	Andrew	USDA-APHIS-Wildlife Services

APPENDIX 2. CONTACT INFORMATION FOR MIDWEST ASSOCIATION OF FISH AND WILDLIFE AGENCIES FURBEARER WORK GROUP MEMBERS.

Illinois

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217-558-6623; Stan.McTaggart@Illinois.gov

Indiana

Gerianne Albers, Indiana Department of Natural Resources
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Iowa

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Kansas

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North Dakota

Stephanie Tucker, North Dakota Game and Fish Department
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Ohio

Vacant

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Wisconsin

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APPENDIX 3. AGENDA FROM THE MIDWEST FURBEARER WORKSHOP HELD IN MEDORA, NORTH DAKOTA, MAY 14-17, 2018.

All times shown are Mountain Daylight Time (MDT), unless otherwise noted.

MONDAY, MAY 14

Travel day

5:30pm CDT (4:30pm MDT): Shuttle leaving Bismarck Airport

6:30-8:30pm MDT: Evening social, Suite #324

TUESDAY, MAY 15

7:00-8:30am: Breakfast (Included)

8:30am-12:00pm: State furbearer biologists business meeting (others by invitation only)

12:00-1:00pm: Lunch (Included)

1:00-1:15pm: Welcome and opening remarks, Terry Steinwand, North Dakota Game and Fish Department

1:15-2:45pm: Session 1, Stephanie Tucker, North Dakota Game and Fish Department

1:15-1:45pm: Changing context for furbearer management. Matt Peek, Kansas Department of Wildlife, Parks, and Tourism

1:45-2:15pm: Using furbearer harvest data as an index: The importance of collecting information on hunting and trapping effort. Chad Parent, North Dakota Game and Fish Department

2:15-2:45pm: Developing a mixed-mode harvest survey for collecting furbearer harvest data. Larry Gigliotti, South Dakota State University

2:45-3:00pm: Break

3:00-4:30pm: Session 2, Stephanie Tucker, North Dakota Game and Fish Department

3:00-3:30pm: Harvest data, population models, and furbearer management: What is sufficient for making decisions? Tim Hiller, Wildlife Ecology Institute and Drew Tyre, University of Nebraska-Lincoln

3:30-4:00pm: Using data and models to make decisions: The 10,000 foot view of structured decision making for harvest management. Drew Tyre, University of Nebraska-Lincoln

4:00-4:30pm: Panel discussion with presenters from Sessions 1 and 2

Supper (On Your Own)

8:00-8:20pm: Poetic expression concerning the Midwest furbearer. Jeremy Duckwitz, USDA-APHIS-Wildlife Services (Located on the patio)

WEDNESDAY, MAY 16

7:00-8:30am: Breakfast (Included)

8:30-9:50am: Session 3, Patrick Isakson, North Dakota Game and Fish Department

8:30-8:50am: Using harvest data to model habitat use and population trends in Iowa's otters. Bridget Nixon, Iowa State University

8:50-9:10am: Ninety-nine years of wolverine harvests in Manitoba: History and analyses. Dean Berezanski, Manitoba Department of Sustainable Development

9:10-9:30am: Predicting abundance of gray wolves in Montana using hunter observations and field monitoring. Kevin Podruzny, Montana Fish, Wildlife and Parks

9:30-9:50am: Establishing a contemporary baseline of wolverine distribution and genetics across 4 western states. Bob Inman, Montana Fish, Wildlife and Parks

9:50-10:20am: Break

10:20am-11:40pm: Session 4, Patrick Isakson, North Dakota Game and Fish Department

10:20-10:40am: Study design and preliminary results from a spotted skunk survey in Wyoming. Zachariah Bell, University of Wyoming

10:40-11:00am: Evaluation of movements and habitat use of suburban striped skunks in the Northern Great Plains. Anna Schneider, University of North Dakota

11:00-11:20am: Distribution of swift fox and sympatric canid species in the Dakotas. Emily Mitchell, South Dakota State University

11:20-11:40am: Attempting to detect muskrats with UAV and thermal technology. Geriann Albers, Indiana Department of Natural Resources

11:40-1:30pm: Lunch (Included)

1:30-4:30pm: Tour of South Unit of Theodore Roosevelt National Park. Blake McCann, Theodore Roosevelt National Park

Supper (On Your Own)

THURSDAY, MAY 17

7:00-8:30am: Breakfast (Included)

8:30-10:00am: Session 5, Phil Mastrangelo, USDA-APHIS-Wildlife Services (retired)

8:30-9:00am: Varmits and victims: Predator control in the American West. Frank Van Nuys, South Dakota School of Mines and Technology

9:00-9:30am: Delta Waterfowl and predator management: A 25 year commitment to duck production in the US and Canadian prairies. Mike Buxton, Delta Waterfowl Foundation

9:30-10:00am: Best Management Practices (BMPs) for trapping updates. John Erb, Minnesota Department of Natural Resources

10:00-10:15am: Break

10:15-11:45am: Session 6, Phil Mastrangelo, USDA-APHIS-Wildlife Services (retired)

10:15-10:45am: Wolf management in Wisconsin. Shawn Rossler, Wisconsin Department of Natural Resources

10:45-11:05am: Using cable devices to live capture wolves for radio-collaring. John Hart, USDA-APHIS-Wildlife Services

11:05-11:25am: Black bear monitoring, research and response in Missouri. Laura Conlee, Missouri Department of Conservation

11:25-11:45am: The North Dakota Cooperative Fur Harvester Education Program – A tale of success. John Paulson, USDA-APHIS-Wildlife Services

11:45am: Adjourn

APPENDIX 4. HOST STATES FOR MIDWEST FURBEARER WORKSHOPS, 1979-2018.

Year	State	Year	State
1979	Kansas	2017	Iowa
1983	Wisconsin	2018	North Dakota
1984	Illinois		
1985	Iowa		
1987	Minnesota		
1988	Indiana		
1989	Missouri		
1990	Nebraska		
1991	South Dakota		
1992	Ohio		
1993	Oklahoma		
1994	North Dakota		
1995	West Virginia		
1996	Michigan		
1997	Illinois		
1998	Kansas		
1999	Wisconsin		
2000	Missouri		
2001	Ohio		
2002	Iowa		
2003	Minnesota		
2004	Illinois		
2005	North Dakota		
2006	Michigan		
2007	Nebraska		
2008	Kansas		
2009	Kentucky		
2010	South Dakota		
2011	Wisconsin		
2012	Missouri		
2013	Illinois		
2014	Ohio		
2015	Indiana		
2016	Minnesota		

APPENDIX 5. LARGE CARNIVORE STATUS REPORT FOR MOUNTAIN LIONS, BLACK BEARS, AND WOLVES.

MOUNTAIN LIONS

	Protected (Y/N) ¹		Estimated population	Harvest (Y/N/NA) ²	Recent changes in distribution
Illinois	Y	0		NA	
Indiana	Y	0		NA	Rare visitor
Iowa	N	<5		NA	Occasional visitor
Kansas	Y	0		NA	None, still getting infrequent dispersers
Kentucky	Y	0		NA	
Michigan	Y	No breeding population		NA	A few transients each year
Minnesota	Y	No breeding population		NA	Decline in transients apparent from 2014 – 2016 compared to 2010 - 2013
Missouri	Y	No breeding population		NA	6-10 transients confirmed each year; 71 confirmations since 1994
Nebraska	Y	No statewide estimate; Pine Ridge Unit: 59 (2017 survey)		Recommended for 2019	3 populations formed since mid-2000s
North Dakota	Y	None available		Y	No
Ohio				NA	
South Dakota	Y			Y	No
Wisconsin	Y	No breeding population		NA	Rare transients

¹Yes indicates the species is protected by state or provincial laws (e.g. listed as a game animal with an open or closed season).

²NA indicates the question is not applicable because no known breeding populations exist with the state or province.

BLACK BEARS

	Protected (Y/N)¹	Estimated population	Harvest (Y/N/NA)²	Recent changes in distribution
Illinois	Y		NA	
Indiana	Y	0	N	Occasional visitor
Iowa	N	<5	NA	Occasional visitor
Kansas	Y	0	NA	None, still getting infrequent dispersers
Kentucky	Y	400 in core area	Y	Expanding population
Michigan	N	~12,000	Y	Expanding population
Minnesota	Y	12 ~ 15,000	Y	Decline from late 90's to ~ 2010, slight increase since
Missouri	Y	300-350	N	Growing and expanding population
Nebraska	Y	0	NA	Rare visitor
North Dakota	Y	0	NA	Occasional visitor
Ohio	Y		NA	
South Dakota	Y	0	NA	
Wisconsin	Y	28,900	Y	Expanding

¹Yes indicates the species is protected by state or provincial laws (e.g. listed as a game animal with an open or closed season).

²NA indicates the question is not applicable because no known breeding populations exist with the state or province.

WOLVES

	Protected (Y/N) ¹		Estimated population	Harvest (Y/N/NA) ²	Recent changes in distribution
Illinois	Y	0		NA	
Indiana	Y	0		NA	Rare visitor
Iowa	Y	<5		NA	Occasional visitor
Kansas	Y	0		NA	None, have only confirmed 2
Kentucky	Y	0		NA	N/A
Michigan	Y	~618		N	UP fully occupied
Minnesota	Y	~2200 (in 2016)		N	None
Missouri	Y	0		NA	Rare visitor
Nebraska	Y	0		NA	Rare visitor
North Dakota	Y	0		NA	Occasional visitor
Ohio	Y	0		NA	
South Dakota	Y	0		NA	
Wisconsin	Y	925-952		N	Expanding

¹Yes indicates the species is protected by state or provincial laws (e.g. listed as a game animal with an open or closed season).

²NA indicates the question is not applicable because no known breeding populations exist with the state or province.