

Wildlife & Fish Health



Midwest Fish and Wildlife Health Committee Meeting

April 7-8, 2014
Columbia, MO

Hosted by:

Missouri Department of Conservation



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Meeting Time and Place

April 7-8, 2014
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Agenda: see Appendix II

Attendance

Attending this year's Midwest Fish and Wildlife Health Committee Meeting were representatives from 10 state fish and wildlife agencies: Illinois, Kansas, Kentucky, Michigan, Minnesota, Missouri, North Dakota, South Dakota, Virginia, and Wisconsin; the University of Missouri, the Southeastern Cooperative Wildlife Disease Study (SCWDS), and representatives from two federal agencies:

- the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (USDA-APHIS-WS),
- the United States Geological Survey, National Wildlife Health Center (USGS-NWHC),

A total of 17 individuals were in attendance (Appendix I). In addition, 2 individuals participated in the meeting via WebEx, including representatives from two state fish and wildlife agencies (Minnesota and Kentucky). Iowa, Indiana, Nebraska, Ohio, and the Canadian provinces of Manitoba, Ontario, and Saskatchewan were not represented.

Executive Summary

Disease Reports

Each state in attendance and the National Wildlife Health Center provided an update on the wildlife disease issues within their jurisdiction. In addition, the states of Iowa, Indiana, Nebraska, and the Canadian province of Ontario submitted a disease report to the Committee even though their representatives were not able to participate in the meeting. For your convenience, an index of disease reports is included in Appendix III.

National Fish and Wildlife Health Initiative Update, Ed Boggess, Director Liaison

Ed provided brief update to the Committee on the current status of the Initiative, which started in 2005. Surveys assessing the capacity of state agencies had been conducted a few years ago; however, when Rebecca Humphries (Michigan DNR) left her position to work for the North American Turkey Federation, the Initiative lost some momentum. Recently, the steering committee met in Denver to re-energize the Initiative, and are beginning to work with states on increasing capacity and coordination for wildlife and fish health issues.

Health Issues in Missouri Elk Populations, Barbara Keller, University of Missouri

An overview of the health related issues in the newly reintroduced Missouri elk population were presented. In 2011 elk reintroductions began into the Missouri Ozarks in

the Peck Ranch Conservation area and the adjacent Chilton Creek Preserve. Three releases have occurred from 2011 to 2013. All elk were sourced from wild populations in southeastern Kentucky. A total of 34 (20F, 14M) elk, were released in 2011, 34 (26F, 8M) elk in 2012 and 39 (36F, 3M) elk in 2013. No new releases are planned at this time. Currently the animals are being monitored and observed in a multifaceted study. Everything from diet to habitat use to cause-specific mortality is being monitored. The overall survival rate for adults in the 2011 cohort is currently 0.94, the 2012 cohort is 0.90, and the 2013 is 0.82. The major cause-specific mortalities in adult elk have been from meningeal worm (*Parelaphostrongylus tenuis*), drought, and predation. Other causes included pneumonia, trauma, overall poor condition, and many that were unknown. Calf survival has ranged from 0.63 in 2011, to 0.04 in 2012, to 0.31 in 2013. The causes of death in calves were similar to those found in adults. As a result of the high number of deaths due to meningeal worm, a secondary study into the prevalence of *P. tenuis* in wildlife populations in the area was undertaken. The overall prevalence of *P. tenuis* in white-tailed deer in the Missouri Ozarks from 2011-2013 was 42%. The current population is estimated at 105 total elk.

Virginia Elk Restoration Project, Megan Kirchgessner, Virginia Department of Game and Inland Fisheries

A brief final review of the relocation of elk from Kentucky to southwest Virginia was provided. Overall low numbers of animals were moved and there have been only 3 confirmed mortalities to date. One bull with an unknown cause of death; one neurologic cow with a working diagnosis of encephalopathy (shot in the head so no brain for examination), and 1 bull that died secondary to a traumatic incident. There is evidence of increased sulfur levels in the elk from KY which have higher than normal levels relative to published normal in domestics (not sure of the comparative value). There is some question as to whether or not this could be the cause of polioencephalomalacia. One final movement of elk occurred in April 2014. The quarantine time has been dramatically shortened by the use of the StatPak/DPP for TB surveillance.

Minnesota Moose Study, Michelle Carstensen, Minnesota Department of Natural Resources

Minnesota's moose are dying at rates much higher than elsewhere in North America. Moose numbers in northwestern (NW) MN have plummeted from over 4,000 to fewer than 100 animals in just the past 2 decades and recent studies of moose in the northeast (NE) suggest this population is also declining, albeit at a less precipitous rate. A recent study of the NE moose herd reported non-hunting mortality rates of 15-26% per year, which was significantly higher than for other northern moose populations (8-12% per year) outside of MN. The specific causes of non-hunting mortality remain unknown as this information has not been identified as a research priority in past or ongoing research. Minnesota DNR launched a new study to determine cause-specific mortality by deploying communication satellite-linked GPS collars on 100 moose in NE Minnesota

and by preparing an extensive network of responders highly trained in conducting field necropsies. Moose mortalities will be thoroughly investigated within 24 hours of death to identify the proximate cause of mortality and to examine the influence of potential contributing factors. Once causes of death and major influential factors are identified, appropriate management actions may be taken to address the population decline.

For the first year of the study (Feb 2013-Feb 2014), 22 of 107 (20.6%; 18 females, 4 males) collared moose have died. Causes of death are as follows: 8 wolf kills (3 of which had predisposing health conditions that likely contributed to their death), 2 wolf-caused injuries that led to secondary lethal bacterial infections, 10 health-related deaths (including 2 *P. tenuis* infection, 3 winter ticks, 1 liver fluke infection with secondary bacterial infection, and 4 unknowns with pending results), 1 trauma (compound fracture that led to septicemia), and 1 unknown (only collar recovered, no carcass was found). Whole carcasses were retrieved for 8 of these moose, with field necropsies performed on the remainder. In 16 of 22 mortality responses (73%), our response time to the scene was ≤ 24 hours (4 of which were < 6 hrs). Collar transmission failures and wolf-caused collar movements have delayed response times in the remainder of cases. Our ability to retrieve intact carcasses has been greatly enhanced by the use of chainsaw winches, powerful snow machines with a rubber sled specifically designed to drag moose, and an Argo (amphibious 6-wheeler). Mortality response teams (2-3 people) are on-call 24 hours/day, everyday (including weekends and holidays). Year 2 efforts began in February, where 37 new moose were added to the study to maintain the sample at > 100 moose for the next 2 years; the overall study is expected to last 8 years.

National Fish and Wildlife Health Network-WHISPers, Bryan Richards, USGS-NWHC

The National Wildlife Health Center is developing a web-based disease outbreak identification system that would provide regional and local disease updates. The system will hopefully standardize data collection, reporting, dissemination, disease surveillance and overall communications and responses to disease outbreaks. There will also be the potential to incorporate species-specific disease issues in to the system. The plan is to have it be an unowned, partner-based system that utilizes already existing systems. The concept will allow for better communication and information sharing. Partners will have the ability to enter data as well as to search and sort through the morbidity and mortality event data. There will be a mapping utility and data collected will be minimal but yet provide the critical information about events. This is currently still in development, but in the future will provide an enhanced situational awareness of wildlife mortality events in real time.

CWD Discussion and Update on Wisconsin's CWD Program Changes, Tami Ryan, Wisconsin Department of Natural Resources

WIDNR has shifted their surveillance strategy to be a rotational scheme around their core CWD area. In addition, there are 4 isolated surveillance areas throughout the state around

CWD positives in captive facilities. In 2013 the sample goal was 2,800 samples. A total of 6,602 samples were tested with 356 positive animals being found. Since 2002, there have been 184,817 animals sampled with 2,504 CWD-positive animals identified. The average turn-around time from harvest to sampling to results is around 17.4 days. They have switched over to a monitoring mode from a eradication and containment-type scheme. Surveillance results have identified that the disease distribution is spreading and the prevalence is increasing. Wisconsin has 16 processors in their Management Zone that participate in their food pantry donation program. In 2013, 354 animals were donated through this program. All animals are sampled for CWD prior to entering the food supply and all positives are removed. At this time the overall prevalence of disease in the core in SW WI in adult males is 25%, in adult females is 12%, and 18-month old males is 20%. Last fall 4 fawns tested positive. Even though there is an apparent population increase occurring in their core area, predictive modeling shows that eventually the prevalence will become high enough to cause a precipitous population decline. Currently the habitat is able to support a higher population with high prevalence but eventually the disease's prevalence effects will surpass population's sustainability.

Several program changes have occurred recently. A bonus buck program was instituted. A hunter shoots a buck and a female, than they are eligible for another buck tag. In addition, the Management Zone concept has switched to affected counties. If a county has a positive animal then that county and any adjacent counties are considered affected and a feeding and baiting ban is instituted. Currently, \$5 from every antlerless tag goes to CWD programs. The agency has also switched from Deer Management Units to a county-based system. Currently the agency is producing recommendations to help reduce the spread of CWD.

A captive cervid facility in Marathon County in Northwest WI tested positive for CWD in 2013. It was a 5-year-old male and the initial epidemiological investigation involved 4 facilities; two breeding facilities and two shooter operation. The final trace out investigation involved 11 additional farms in WI and farms in 11 other states. Since the original positive, an additional doe has tested positive from the source farm.

ACTION ITEMS

- Committee is requesting the National Wildlife Health Center produce a white paper on the occurrence of “spontaneous CWD.” In recent years, this concept has become increasingly popular among stakeholder groups as a potential explanation for CWD occurrence and/or spread. A thorough review of the scientific literature for spontaneity in TSEs, with specific focus on CWD, would be very informative and useful to help meet the needs of ongoing CWD management efforts in Midwest states.
- Several Midwest states have documented *P. tenuis* as a significant source of mortality in free-ranging cervid populations. Yet, definitive diagnosis for this

disease requires fresh carcasses and thorough examination of the brain and spinal cord for evidence of the nematode. Previously, a live-animal, serologic test was available in Canada to screen for exposure to *P. tenuis*; however, this is no longer available. Minnesota, North Dakota, Missouri, Virginia, and potential several other states would benefit from the availability of a serologic test for this parasite in their current wildlife health monitoring and management programs. The Committee will send a formal request letter to the National Wildlife Health Center, University of Tennessee, and Southeast Cooperative Wildlife Disease Study (and possibly others) to re-develop this test and make it available to States; financial contributions from several states would be made available to assist with the development if a willing partner is identified.

AFWA Federal Appropriations Recommendations for 2015 Federal Budget

We recommend the following funding is needed to support state and tribal monitoring, research and management of these diseases in free-ranging wildlife:

- Ranking #1, Chronic Wasting Disease for \$20M
- Ranking #2, Bovine Tuberculosis for \$5M
- Ranking #3, Aquaculture/VHS for \$3M
- Ranking #4, Invasive Species for \$30M
- Ranking #5, White Nose Syndrome for \$15M
- Ranking #6, Avian Health for \$5M
- Ranking #7, Amphibians and Reptile Health for \$5M

We recommend funding is continued \$500,000 for Southeast Cooperative Wildlife Disease Study. We also recommend funding for USDA-APHIS-WS for the Wildlife Disease Monitoring and Surveillance program for \$10M. This program funds wildlife disease assistance to states at no cost, such as CWD and bovine TB surveillance, and participation of wildlife disease biologists in state agency wildlife disease management activities.

Time and Place of Next Meeting

During the wrap-up, the committee decided the location for the 2015 meeting would be in Madison, WI, in early April.

This year's meeting was a success and we want to thank the Directors who sent representatives to this meeting and encourage those who did not to consider sending one to next year's meeting.

Also, we thank Missouri Department of Conservation for hosting this year's meeting.

Submitted by: Michelle Carstensen, Chair and Dan Grove, Vice-Chair

APPENDIX I. ATTENDEE NAMES AND CONTACT INFORMATION

Name	Email	Office Phone
Batten, Jasmine	jasmine.batten@mdc.mo.gov	573-815-7901x.3934
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Attended via Webex	Email	Office Phone
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Danks, Elizabeth	elizabeth.danks@ky.gov	502-564-3400

Name	Organization	Address	City, State	Zip
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Boggess, Ed	Minnesota Department of Natural Resources	500 Lafayette Rd.	St. Paul, MN	55155
Carstensen, Michelle	Minnesota Department of Natural Resources	5463-C West Broadway	Forest Lake, MN	55025
Danks, Elizabeth	Kentucky Department Fish and Wildlife	1 Sportsman's Lane	Frankfort, KY	40601
DeLiberto, Thomas	USDA-APHIS Wildlife Services	4101 LaPorte Ave	Fort Collin, CO	80521
Dufford, Doug	Illinois Department of Natural Resources	8542 N. Lake Rd	Lena, IL	61048
Fischer, John	Southeast Cooperative Wildlife Disease Study	University of Georgia	Athens, GA	30602
Griffin, Steve	South Dakota Game Fish and Parks	4130 Adventure Trl	Rapid City, SD	57702
Grove, Dan	North Dakota Game and Fish	100 N. Bismarck Expwy	Bismark, ND	58501
Hansen, Lonnie	Missouri Department of Conservation	3500 E Gans Rd	Columbia, MO	65201
Hesting, Shane	Kansas Dept of Wildlife, Parks & Tourism	1830 Merchant	Emporia, KS	66801
Keller, Barbara	University of Missouri	302 A-B Nat Res Bldg	Columbia, MO	65211
Kirchgessner, Megan	Virginia Dept. of Game & Inland Fisheries	4010 W. Broad St.	Richmond, VA	23230
Long, Lindsey	Wisconsin Department of Natural Resources	2801 Progress Rd	Madison, WI	53716
Richards, Bryan	USGS National Wildlife Health Center	6006 Schroeder Rd	Madison, WI	53711
Ryan, Tamara	Wisconsin Department of Natural Resources	2801 Progress Rd	Madison, WI	53716
Schmitt, Steve	Michigan Department of Natural Resources	4125 Beaumont Rd	Lansing, MI	48910
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APPENDIX II . AGENDA

Monday, April 7

12:00-12:15	Arrival and welcome	Kelly Straka
12:15	Opening remarks and introductions	M Carstensen
12:30	Greetings and Re-initiation of the National F&W Health Steering Committee from our Director Liaison to MAFWA	Ed Boggress
12:50	State disease reports	State Reps
2:15	Break	
2:30	State disease reports (continued)	State Reps
5:00	Break for dinner	

Tuesday, April 8

8:00	Missouri Wildlife Health Issues	Kelly Straka
8:30	Invited presentations Suggested topics: Elk Health Issues (MO, VA)	Barb Keller, Megan Kirchgessner
10:15	Break	
10:30	Invited presentations Suggested topic: Minnesota Moose Mortality	M Carstensen
12:00	Lunch	
12:45	Invited presentations Suggested topic(s): Wildlife Health Event Reporting Newcastle Disease Pilot Project	B Richards
2:15	Break	
2:30	Invited presentations Suggested topic: CWD Management	Tami Ryan (facilitator)/All
4:00	AFWA Federal Appropriations Recommendations	All
4:20	Action Items	All
4:30	Wrap up and next year's host	

Wednesday, April 9

Field trip to the elk relocation project, Peck Ranch Conservation Area, Dr. Barb Keller and MDC staff

Wednesday, April 9th, 2014
MFWHC Field Trip to Peck Ranch Conservation Area

The trip will depart from Stoney Creek Inn at 8:30 am. Transportation will be provided. Travel time will be approximately 3 hours. We will stop for lunch in the scenic metropolis of Eminence, the Elk Capital of Missouri.



Following lunch, Dr. Barb Keller, postdoctoral student through the University of Missouri, will meet us for a driving tour through the Conservation Area. This tour will likely last for 3-4 hours. MDC staff will give background on the history and construction of the elk holding facilities, as well as habitat management efforts in the area. MDC's infamous elk biologist, Dr. Lonnie Hansen, will be joining the group in the evening for thrilling discussions of elk management in Missouri.

Rooms at the Stoney Creek Inn have been reserved under my name (Kelly Straka, MDC) the night of April 8th. Please make your reservations by March 14th. We will be staying at The Landing the night of April 9th. The Landing is located on the banks of Current River in the foothills of the Missouri Ozarks in Van Buren, MO. The Current and Jacks Fork Rivers make up the Ozark National Scenic Riverways, one of the premier National Parks in the United States, and are beautiful crystal clear rivers offering outstanding scenic landscapes. You will have to make your own reservations, but a block of rooms has been reserved under my name as well (Kelly Straka, MDC). The government rate is \$77/single and \$88/double. The phone number to make your reservation is 573-323-8156; more information can be found at: <http://eatsleepfloat.com/>

We will leave Van Buren in the morning of Thursday, April 10th, returning to Columbia around noon. Alternative arrangements for those flying out of St. Louis may be available; contact me if you would like to travel directly from Van Buren to St. Louis.

The link to more information on Peck Ranch Conservation Area is:
<http://mdc4.mdc.mo.gov/applications/moatlas/AreaSummaryPage.aspx?txtAreaID=5203>