

Minutes
MAFWA Annual Meeting
June 28 – July 1, 2015
Radisson Harborview Hotel
Duluth, Minnesota

Sunday, June 28, 2015

MAFWA Executive Committee Meeting 5:00 pm (*Agenda*)

President's Welcome Reception (MAFWA & AMFGLEO) – Sponsored by U.S. Sportsmen's Alliance

Hospitality Room – Sponsored by AMFGLEO

Monday, June 29, 2015

Breakfast – Sponsored by Recreational Boating and Fishing Foundation (RBFF) (PowerPoint Presentation – Exhibit 3)

GREETINGS and WELCOME to MINNESOTA

Welcome to Minnesota

Ed Boggess, President of MAFWA and FAW Director – Welcome to the 82nd MAFWA conference. Introduced Grant Wilson, Primary Planner, Minnesota. We will be drawing door prizes after every break to get people back in the room. *Grant Wilson* – On Minnesota DNR staff here to host and help make sure your stay is more comfortable. All meetings are on this floor; this room, the Viking room for meals and the Duluth Room for other small meetings. *Ed Boggess, MN* – Welcome, Minnesota is an outdoor state; we are protecting the legacy, and the state voted five times to protect the resources since 1988. Recognize folks in the room: Commissioner from Minnesota Tom Landwehr, first commissioner who came from fish or wildlife background, appointed in 2011, in second term of office. This has been good for us. Indiana DNR director Cam Clark will be here later. Recognize Cathy Stepp, WI DNR Secretary. Larry Voyles, AZ Game and Fish Director and President of AFWA and Ron Regan, AFWA Executive Director. Dave Schad, MN DNR Deputy Commissioner, is also here, and Sarah Strommen, Assistant Commissioner. Many other important people here today. Tom, Dave and Sarah only here today. This is the second time we have had a joint meeting with AMFGLEO, we will be together part of time and will have meals and socials together.

Ken Soring, MN DNR Law Enforcement Director – Welcome to MN, our law enforcement staff will help you however we can. Glad to have you here. Joint meeting, really important connection to strengthen our knowledge. At AFWA law enforcement will meet a day or two early, then join fish and wildlife professionals at that conference. Increasingly our role is as ambassadors as the face of the department. Deer season goals, why changing Fisheries management practices, need to know from department standpoint. The strategic plan for our

division is a supporting document for the department and the work department does as a whole. Important to have Commissioners with passion for the sport and the department. I worked in wildlife research before then wanted to do something as important and went into law enforcement. How many people will not be at next conference, who is retiring? (Hands in audience raised). World class conservationists in this room and feel blessed to work with individuals like you.

Tom Landwehr, MN DNR Commissioner – Fun to see theme of meeting. Duluth is most outdoor town in North America; lake fishing, stream fishing, wilderness camping, outstanding hunting and agricultural type activities. Great state to work in. My background is in wildlife, worked with DNR through 1999, DU for five years, then TNC for seven years. Centered here in Minnesota my whole career. Welcome to this great place. Inherited outstanding natural resources, but the work you do ensures that. Thank you for the work you do. DNR has six disciplines and we manage all outdoor natural resources in the state. Lot of issues facing us as a department. Daunting challenges of land use, fish and wildlife management and law enforcement, little ability to do anything about it, adaptation is the key. Invasive species is onerous challenge for land and water managers. Expect another million people to live in this state in next five years. Intensity increasing on land use and more fragmentation of the land. Chemicals in the environment, Lake Superior one of cleanest lakes in North America, but mercury warnings in fish out right now. Fish and wildlife disease like avian influenza outbreak, no new cases since June 5, but 4 million birds euthanized so far. Not able to track where it came from. Dealt with CWD and TB and look for next wave of diseases. Poaching also a problem globally, but in local high profile cases, trying to make poaching closer to a felony. Define key species, grassland species and species such as monarchs and other pollinating species. Walleye population crashing in some areas and long term declines in others. Huge issues for us as natural resource managers. Good things to look at as well. Growing awareness in the public, good for us, good legislation the legacy amendment which passed in 2008 and provided funds from 3/8 cent sales tax increase, about \$300 million a year. Blessed here in Minnesota, people love their natural resources here. Ground-swell in organizing to conquer problem with pollinators (bees and monarchs). People willing to make sacrifice to see water resources needs are met. Pope came out recently in support. Six years ago, Minnesota High School clay target league was formed, schools can organize trap teams and compete statewide; in the beginning had 60 kids, now 6,800 kids. Coed sport and kids can compete, tremendous ego booster, tremendous interest in that field. Also, National Archery in the Schools Program (NASP) has 100,000 kids in Minnesota, this indicates where we are going. Governor got informed about water quality and importance of riparian buffer strips in areas of the state, controversial with farmers, Governor stood up and said it was the right thing to do. Not as good as when we started program, but better than we had. Governor heard from 300 conservationists. Seeing good things going on, hopefully nationally. Moving forward, big challenges deserve big solutions, good science and good knowledge. Not state specific issues, like monarchs, collaborate and coordinate to work on projects, so important to have groups like MAFWA; will make us more successful on things like the Farm Bill and we can do better than what we have, hopefully better outcome next time around. Enforcement across state lines, identify violations and individuals who cross state lines. Information sharing is critical. Invasive species is another issue, sharing is important to protect against those species. Northern long-eared bat (NLEB) workshop, coordinated through MAFWA, and the states and I thank **Tom** Melius for taking the lead on this, better outcome than it could have been without

coordination and collaboration. Thank you to MAFWA and AFWA folks who keep the sharing and collaboration and coordination open.

STATE HOT TOPICS

State Hot Topics (MAFWA AMFGLEO) (13 States, 3 Provinces)

Ollie Torgerson, MAFWA Executive Secretary, Facilitator – Welcome, this is our 82nd meeting; thanks to all sponsors for their support. I facilitate the hot topics session and it has become one of the most popular parts of program. Directors will get up and do teaching moment about something that went right or went wrong in the past year. We have new directors on both ends of our state alphabet so starting at the middle this year.

Bob Ziehmer, MO – Doyle Brown put together topics for me; trashed those. Protecting the legacy, Tom mentioned we have law enforcement with us. Hope you can teach me. Share remarks and ask for insight and experiences. Captive white-tailed deer issue came up 13 months ago; incredible staff work, and we moved forward with captive cervid legislation. Within two weeks after our Commission passed those, the state legislature amended an Ag. bill and gave captive cervid jurisdiction to the Department of Agriculture and that bill passed. Have super majority in both houses. Ran fast and was on Governor's desk before you knew it, but the Governor stood firm and vetoed that legislation, said not supportive of agriculture control. In September, the legislature had override opportunity on Governor's veto; 15 lobbyists were hired, and at 3:00 am the override failed by one vote. I was not a popular person at that point. Shortly after that lawsuits were filed by captive cervid industry, who challenged Commission authority. Many captive cervid bills were filed, the most filed in last 20 years; citizens were involved and in the end no harm was done; and we weathered the storm. Take home point: What you do is important; support fish and wildlife, and combine that with rich soil and productive waters. My job is not a popularity contest, requires leadership, be content in what you can accomplish. I take the captive cervid stakeholder group at their word and they will continue to come after us. Special interest groups are powerful. Citizen support remains strong; we were successful because of staff that came before me and the fact that every conservation group is connected. We needed those 1,450 full time employees and citizens to support us and be ambassadors. Look at all of diverse venues and use them to touch people. Tom touched on this, blessed to work in 21st century, major challenges out there. From back corner, John Fischer to front corner Ron Regan, we need you. Curtis Taylor and Gordon Meyers dealt with this same issue. State conservation groups are powerful players, but nothing different than early 1900s. Look at bigger picture. Protect staff, folks are vindictive and will do anything to get their way. Always play for the long term, keep chin up and take the high road, all we have is our integrity and trust. Continue to educate and educate continuously. I don't have all of the answers, but whatever side of the fence you are on, you are what you are (deer is deer, bear is bear, etc.).

Ollie – We will hold discussion until the end to try to keep on schedule.

Ed Boggess, MN – Commissioner Landwehr talked on the one issue I am going to talk about. Last year talked about Fisheries, large lake by twin cities. Ongoing issue and recent issue, high path Avian Influenza (AI) that developed in captive birds, out of the blue. First showed up in Mississippi Flyway in early March, started investigating wild birds, due to a history of it there.

Jumped on health issue right away, to see if anything we can do with quick action. Explanation was migratory birds brought AI into this turkey barn, and we assumed that as well; because of timing it was a puzzle, because lack of migratory birds at that time of year and closed-in flock of turkeys. Found a few overwintering mallards several miles from facility and a general lack of migratory birds in that area. Started doing environmental sampling (feces) in ducks that were coming in. In 2010, tested over 2,000 birds at that time, detected low path, but no high path. Showed up late last year in commercial facilities, first time in Minnesota was this turkey farm, then started popping up all over, 108 farms, 9 million birds; Iowa has more birds because of laying hen facilities, but more locations here. Tested raptors, wild turkeys and other die offs of five or more birds. Also wild turkey season started and notified hunters and told them how to report it if found. Also, solicited hunters in five most infected counties. All that testing, 3,000 environmental samples some low path, no high path. Coopers Hawk found in April with high path, puzzling how it contracted it. Shortly after, Kentucky had a duck, snowy owl in Wisconsin; and most recently some goslings in Michigan. Those are the only ones we are aware of in wild birds. Rapidly spreading in captive populations. Looking at serology and swabbing of birds we are banding this summer, can detect active infections. Not expecting to find many active in the summer. Do blood samples and hunter harvest blood samples. How is it getting into these facilities and where is it residing in between? There are 124 different Hs and Ns; similar to the human flu. It is important that we have good science and facts, criticized by poultry industry because we are not finding it. Meet with those folks in next couple of weeks. Get good science on this issue. Concern is that it will erode support for habitat and wildlife work in the state. We still feel there is a migratory bird component, but not sure of vector between them and how it is surviving. The more data we can bring to discussions the better, so they can manage bio-security different; help us with understanding, but no outcome yet.

Scott Peterson, ND – Deputy Director, Director Terry Steinwand sends his regards. How we utilize Farm Bill biologists in NRCS offices. Initiative measure on November election ballot last year, Measure Five would have put oil tax money into clean water/wildlife fund, as high as \$150 million a year; primary sponsors Ducks Unlimited (DU) and Pheasants Forever (PF); we didn't take a stand as a state agency. Some rallied against it, like farmers and petroleum groups. Polling information showed reasonable chance of passing, but failed with only 20% approval of voters. As retribution to supporters, opponents of the measure tried to discredit DU especially. Introduced a bill would have put regulations on us to prevent us from providing easements to conservation groups. Also trying to get rid of these 8 Farm Bill biologists in NRCS offices. Farmers interested in conservation come into NRCS offices and talk to these biologists about conservation. Practice is utilized across the Midwest, used extensively by these states, three DU and five for PF biologists. Real concern by us if it gets traction; like to keep this program going in North Dakota. They are claiming those folks would have influence on farm bill compliance issues, grain growers trying to get them out. NRCS will honor current contracts, then put out RFP to get partners in similar groups to move forward. July 15 is deadline, scrambling to get everything in order. Stay as long as comparable plan can be delivered. Also, offered to entertain partnerships to provide the same services as DU and PF; bottom line is we will have documentation and continue to go about reestablishing habitat on the ground. Don't know what we could have done separately, our agency was caught in the crossfire of Measure Five, not apologetic about these partnerships, we are proud of them and one of the few ways to leverage our dollars. Only advice is, if this spreads outside the boundaries of North Dakota, document

what you have accomplished with those partnerships; important to know how many landowner contracts, acreages and access granted, easier to defend then. If partnerships change, at end of trial period, go back to baseline data and you will be able to go back to old model.

Bill Moritz, MI – Each of these topics discussed are running in Michigan as well. Public land ownership is my topic, 4.6 million acres of state managed land in Michigan. Have cap on amount of land we can own and are 15,000 acres under that cap. They say there is too much land in public ownership; arguments are governments should be smaller. We make payment in lieu of taxes to help these small communities struggling to come up with basic services, especially counties with a lot of public ownership. Half of our portfolio is tax averted land, Governor recommends full tax payment but legislature cuts it so we pay partial amount requested, but it is not our issue. Use variety of funds to pay those taxes. Be a good neighbor to private landowners, problems spill over from public land. What are impacts to these, lumber and fish and wildlife are billion dollar issues. Protect the legacy, access to land is important. People take public land for granted, tremendous amount of quality of life value and get metrics available to show that return on investment. Local engagement with communities is increasingly important, talk to future legislators in communities. Not a strong agency relationship in local communities, when staff goes out into communities they didn't talk about overarching values of natural resources; don't just talk about your own wheelhouse, but the entire agency. Share information with elected officials; talk on their terms, not ours. Return on investment locally to connect to business leaders, don't just provide statewide data. Be sure conservation is relevant, one-to-one conversation at local levels. At lot of work by everyone involved.

Jim Douglas, NE – Discussed moose on the loose or “ready, aim, fire” several times which has to do with mountain lions in Nebraska. Latest mountain lion incident occurred next to kid's education center in Omaha; local law enforcement shot it 14 times and only one of those times was lethal, all shots were straight on. Not intended to be negative on law enforcement, but we had to have a meeting after that; a lot of uproar in public. Some reported that the animal had a broken leg, reported in the media, but it did not. Media uproar comes on heels of incident and questions on maintaining season authority. Passed a bill, but Governor vetoed that and it was overridden by a couple of votes. Public opinion is changing because of changing demographics, people are moving east and their opinion is different than those in western Nebraska. Have to be cognizant of public opinion to design programs in a way that starts with good science and goes into rationale and conservation. We have 49 senators with term limits of 8 years, last year we had 18 new senators and next year 18 more new; the problem is to know scope of the state better, public opinion and what new legislators think. Know state of your state as it applies to public opinion, whether messaging is getting through and know it politically and if Governor is going to follow through. We are upgrading our education facilities; wildlife and human interaction is extremely important. *Ollie* – Did you lose ability to manage mountain lions. *Jim Douglas, NE* – No, but no season this year.

Steve Beam, KY – I have been on board for five weeks now. Changed makeup of Board, nine members each have a district and person is nominated by the districts sportsmen and then selected by the Governor, and it is supposed to be nonpartisan. In 2010, term limits were installed, can serve no more than two terms, so all long-serving members are gone. Also, now need to be confirmed by the Senate. Changes occurred because local citizens thought too much

ownership and political gain; several members were on over 20 years. Now have new system. Unintended consequences; count terms going forward or from what terms they had already served? One person, the Governor appointed him to fifth term, but Senate did not approve him. Bigger issue is long serving members acted as mentors. Biology is complicated, but how process works is even more complicated and continues to be a challenge; and takes more staff time to train new members. Spend a lot of time trying to explain each issue to the new commissioners. Lack of continuity creates a lot of lack of institutional knowledge. For instance, crossbow hunting concurrent with archery season; was bloody, bowhunters fought us and it didn't pass the commission; more and more interaction with the legislature. In 2007 it got ugly; deer hunters are predominantly firearms hunters and they are in favor of this. Deal with this through bag limits. Again this year it came up, law makes crossbows concurrent with archery season and it took a lot of discussion, because no one who was on commission in 2007 was on this commission; it passed for 65 year olds and older. Another challenge is the timing of the process. Happens in the summer, seated in August, gone through three nominations, one district open because of the Senate confirmation thing. Don't know what board will look like in August; can vote on items and then be booted off by legislature in February and not sure of legal ramifications on anything they vote for in the meantime. Plan is to up to amount of training we give Commission members.

Scott Zody, OH – Hearing a theme and big challenges, some bloody and some failures in dealing with those things. We find ourselves sideways because we didn't anticipate or didn't communicate to individuals. Informed consent: look into it, they provide fantastic training. How to work with people and how to get past "no"; great training. I am going to talk about a win. A couple challenges on whitetail deer. Group of mayors in Cleveland area (Coga County); densely populated but a lot of green space for deer and a lot of human conflict. We had one mayor in a suburb who was raising cane, said it was DNRs problem and we needed to take care of it. I can't go into a city or municipality and tell them what to do because we are home rule state. Try to separate mayors and work with reasonable ones; fortunately the one mayor was surrounded by different communities who had a different idea and worked with us; one has an archery season. Organized a small meeting with that group; listened, identified the issues, City and City Councils had put themselves in a box by not allowing any type of hunting or firearms; have nuisance permits for a variety of animals, primarily for landowners and adapted it to urban/suburban situation in order for them to put together a model ordinance to deal with that issue. From hunting standpoint, put together a technical guide, used some of Mark Reiter's information from Indiana, created a brochure and took to larger meeting of 15-20 mayors. Last week, mayor causing problems asked us to start working on model ordinance to approach on regional effort. Big progress and turning corner and working in positive way. Have a person who deals with urban/suburban attitudes, does a great job. Another area in Cincinnati, isolated area that has three small parks and has a deer problem, but folks in area are affluent and had political advantage and did not want to cull the deer. Wanted birth control, they found researcher to work with them, to capture, sterilize and release deer back in that area. My biologists wanted nothing to do with this; don't think it is going to work; but let them do it, want to prove this doesn't work so letting them do a pilot project for three years and we will evaluate it at the end of that period and then move toward lethal/nonlethal approach if it doesn't work. **Ollie** – Duluth has done a great job on deer management, book available on case history using local archery clubs in this city.

Ollie – MAFWA is incorporated in the State of Kansas and Sheila Kemmis keeps all of our archives there.

Keith Sexson, KS – Report we have mountain lions and recently a black bear in southeastern Kansas and a gray wolf that showed up. Coyote hunter and his dogs got tangled up with it, wolf winning the fight so he rescued his dog; therefore we have a mounted wolf in the Secretary's office. Legislative issue, chief legal counsel Chris Tymeson is here too; privatizing wildlife and looking back on North American Model. In 2011, 198 class deer taken illegally, won a contest and another individual had pictures of the deer and tracked it down and found out the guy had taken it illegally. Adjoining landowner wanted possession of that deer and we have no obligation to give it to anybody. Made big push legislatively to have seized wildlife returned to landowner from which it came. Partnered with NGOs, state statute, empowered us to seize animals taken illegally. The statute started out with deer and ended up as wildlife. Under state mandate to do due diligence to see if landowner wants parts, holding animals because of this. Did not help this particular individual, did not back up to the point where he got the animal. Tried this year to make retroactive for five years and anything we were holding would have to be given to landowners. Legislature ran out of time to work these things out; kind of a win to be able to push this aside. We invoked help of NGOs and made the point that privatization of wildlife is the issue. North American Model was invoked and used heavily to influence legislators. Need to work with partners to sidetrack these types of things. Working on license fee increase, none since 2002, on resident deer permits none since 1982; at stage where we need to take this to the public. Feel we have programs to show good cause for increase. Our personnel has had no salary adjustments for 10 years and we are losing good people to private industries, other states and federal government as well. Looking at salary structure, one caveat is we have a classified system, no one wants to consider unclassified, but we have greater opportunity to do salary adjustments in that range. Open positions are going to unclassified positions, hope to have greater impact and control on salaries. Lost a fair number of conservation officers to other states. Another state wanted to start a canine corps, looked at how we run it, took three of our officer's right out of training and we are having a border war. They probably want our dogs too and that is where we draw the line. It is one of those problems, can't fault employees for moving to better opportunities. Our Secretary, Robin Jennison is committed to doing this. We have done things for customers, but not taken care of our staff, so big initiative.

Kelly Hepler, SD – Good to be back in the Midwest, I was in Alaska for 35 years, but I am from South Dakota. Jim was talking about lethal take of mountain lions in Nebraska. We have lions in outskirts of Rapid City. What is new to me is conservation officers are in a separate agency in Alaska and we didn't have close feeling like we have in South Dakota. Well trained officers, shot with officers in training. Habitat is key issue in South Dakota, but we need to talk about Wind Cave Park elk. Issue is great relationship with NPS, we work close together, but they have a policy on overpopulation on elk. They used a helicopter to haze over onto our property, and a lot of biologists not happy about that and the elk are hanging around the fence. Concerns with CWD also; want to shoot all of the diseased animals. There is one foot separation between federal and state land, but they said they will bring in their own staff and shoot these animals and leave them where they lie; don't feel this is going to work. They are going to shoot the animals so we decided to go after them. Haze animals out of their home, against fence and shoot them, we said that is not going to happen and we are going up against them in the press. Difference of

agreement on how we do business, working with Carol Bamberry on that. It is an ongoing discussion, news release coming out from park service in August; plan to take animals and give meat to elders on reservations.

Dale Garner, IA – Kelley Myers is sitting on a lake on vacation in Tennessee and that is why I am here, remember to get your vacation in front of your bosses first. On CWD, we joined the club in 2014 with three captive facilities infected and still in lawsuit. In 2013, found it in the wild, fairly easy to find and surrounded by everyone who has it. Used management strategy from Nebraska; found in part of state right across from Wisconsin. It is very political, kept personal for locals and used local staff and found local media and local legislators and NGOs and held numerous public meetings in that area. We provide the science and told them we were there to help them manage “your” deer herd. Using that plan and continuing to let them help make the decisions on their resource. Blessed in Midwest to have good wildlife health professionals, like Dr. John Fischer in the back of the room. Be involved at Midwest and national level.

Cathy Stepp, WI – Great to be here, combination of environmental and fish and wildlife issues. I spend a lot of time working on environmental quality side of the ledger. Kurt Thiede will be joining me today, he is my deputy secretary. Put together hot point issues; misery loves company. Disregard staff points and talk about perspective, funding challenges and legislative challenges. I have a different background, not wildlife or science background, but was a State Senator and was on DNR Board appointed by the Governor. When on the Board I was critical of the department. Saw a disconnect between department and the constituents and legislature. Message was not resonating, legislators were going around the Board and saw changes because of disconnect in communication. Focused on understanding ambassadors of natural resources, but they are not sales people and can’t be afraid to sell natural resources. My staff bolsters me, our job is to sing praises and not be afraid to do that and engage legislators, especially new ones. Citizen legislators come in and they have no experience on the issues, our job is to educate them; educate early and often. Engage them and get them involved in strategic planning on the inside or something like that. Created county impact statements for legislators, what is important and what matters to them. Benefits and return on investment is important. Continue to meet regularly and often with citizen groups, people just want to be hunters/fishers, our responsibility to connect with them and find who can go to the legislature for you. Humbled by lack of expertise, but I have the best staff in the world. We have to hold the bag when we screw it up; it is on us to make people understand what we do every day. *Ollie* – Thanks for providing office space for me in Rhinelander and for providing administrative support.

Mark Reiter, IN – Told story of meeting prison guard, working in laundry room at juvenile facility; and how he got control of prisoners. We are going through a huge change in F&W division and big change in retirement plan; people were going to walk out the door. Great time to make changes, laid out for staff what I wanted; everybody needs to do recruitment, retention and reactivation and that was our job and they told me they didn’t have time. Need to broaden constituency/customer base. Have urban biologists and organize conservation community in the state. They said that would alienate hunters and fishers and they didn’t want to do that. Everything done on landscape scale, but people doing it part time and look for those, staff said they don’t have time. Done well working within their boundaries and regionally and I thought I was in for a big fight. When I think about it I should have taken Pucker’s (prison guard) words

and said we are going to do this or I am going to bite your nose off. *Ollie* – More than one approach to get the job done.

Wayne Rosenthal, IL – Biggest challenge, was career path getting to this position, came from legislature and military background. Took over father-in-law's farm in 1990 and got involved in conservation, spent a lot of time in water office. I ran for office and became state representative and things I had done and being involved locally helped me, but untraditional path to this job. I farm about 900 acres, I put in five wetlands, planted 50 acres of trees and I no till on everything I do and I have milkweed in my CRP. I also have a hunting preserve. One of best things to me, in two days I turned the attitude around. When I was flying airplanes, I was the tip of spear, and staff of the spear is the support people all the way down the shaft. Important people start at lowest level, but that is not where they stay and they are passionate about their interests. General revenue is \$39 million, but don't look at what we lost, but what I am going to do with what money I have. I eliminated layer of political appointments, 16 divisions and that staff has to step up. Working through the budget, but the job gets done because of the people you have. We need to be more responsive to the public and get things done more quickly; as more responsive within your own agency get more done from within and with constituents. My life experience helps me deal with the issues. In my position as legislator, if not listening to you, how do I expect you to listen to me? One more takeoff than landing, because of that my reactions to things is different and I have cheated death a lot of times.

Open Discussion on State Reports

Ollie Torgerson, MAFWA Executive Secretary, Facilitator – Thanks directors, no time left for discussion. *Ed Boggess, MN DNR* - Legal committee meets in Duluth Room and AMFGLEO is in Great Hall number two.

Refreshment Break - Sponsored by National Archery in the Schools Program

Ed Boggess, MN DNR – Introduced Jim Martin, former chief of fisheries in Oregon and special appointment to the Governor on trout fisheries. We have had him talk before.

Information Flow in Complex Systems and Improving Decision-making

Jim Martin, Conservation Director, Berkley Conservation Institute – (article written by graduate student Exhibit 4) – Honored to be here, spent 30 years in fisheries. Hot topics resonated with me, bridging gap between science and users. Hard time, since Roosevelt and Leopold; massive expectation of us, less resources and more politicization of topics. We have to rethink how we do things, what success looks like and rethink how we get things done. Vice is squeezing people every two years and with every legislature. I have been invited to give you wisdom and thoughts. I love talking about how it is going to be. Think about trajectory; talked to Becky Humphries and asked her what talk was most helpful, she said my talk about Coho collapse and what it taught us about decision making under pressure. Thinking about situation we are facing and politicization and thinking people just don't want to hear the reality of what wildlife is up against, not partisan thing either, they just don't want to hear it. Keep the numbers, put finger on pulse of the resource and wave our hands every now and then, ideology does not trump reality. I am from science background and challenge is bridging the gap with communications and doing our job. Fish story: chief of fisheries in Oregon, came through as research biologist, then harvest management, then administration, in 1960s looked rosy for

department, building hatcheries and breaking out production of salmon, sky was the limit, 85% of all fish in ocean; success right and left, filled with arrogance of management and then the bottom fell out in 1977. Only one tenth of fish returned, flip flop of ocean productivity, oscillation, competing power of Alaskan current meeting California current, water was full of predators. We only had one choice, to restrict fisheries; entire industry was in an uproar. Moves occurred to take our authority away, personal retribution against our director and it was difficult and hard to figure out what we didn't know. After 15 years of production in the millions and we had to figure out a new plan. Called together best scientists and did analysis of spawning grounds and put together data points; national limiting factor of the population; used 15 data points and wanted to know what new plan should be, they thought we were out of control because it was business. Battle began to ratchet plans back and it got nasty. Your agencies are under assault by people who don't understand what your agencies are about; mad because they are scared of what this means to their future. Over the period of years, we knocked harvest rates back to 55% to 60%, but we didn't see populations building on spawning grounds or in our returns. We had excuses, but as years preceded the population did not respond, in fact it contracted, still strong in strong hold populations; we kept asking ourselves why. Too busy defending to listen to voices that were saying it was not building populations, I went and listened to a talk from Dr. Dave Bella at Oregon University and he was a civil engineer, looked at disasters in depth (like Challenger crash, etc.). Engineers thought 1,000 times more alike than Administrators thought; perception of the risk is different and how does that happen. How did we lose the Vietnam war? The insight is, guys in Washington thought we were winning and guys in the jungle knew we weren't. Everybody wants to support the leader and believe the plan is right, so at every level, pass good news to the top, but passing bad news to top goes very slowly. Like Montgomery Ward used to be biggest sales company, went bankrupt; like GM, etc.; everybody wants to be a team player and everybody in your agency hopes strategy is correct and fears sending bad news up the food chain that strategy is not working. True of all organizations, good news goes directly to the top, but bad news is sometimes triple checked and sometimes never gets there; systematic distortion of information. How do we deal with problem people (those that bring up the problem), like a splinter, they become red and swollen and then puss forms, then it is ejected (we get rid of problem people). The "awesome" people (team players) are watching this; same in government, private industry, etc. It is much worse in organizations under pressure. Distortion is worse, the more severe the problem and we train people to think about the distinction between team players and problem people. So I looked to the Coho people in the field and what they thought about what was going on, went back and pulled team together, openly and honestly confront that Coho were not developing; hard to defend in media, so we confronted the data. "In God we trust, all others bring data." Knew problems with Coho was in data sets and reprogrammed money; teased out all assumptions in plan and did research to examine every assumption and it took us six years to figure it out. Three assumptions: standard index streams were standard all along the coast, only data we had, devised plan to digitize data along all 6,000 miles of stream, three times as productive as random areas. We thought, what were they thinking, not trying to characterize entire population, one-third or less productive as standard index streams; ocean productivity survival, need to pay attention to data points; and hatchery strays were confounding data. Went to drawing board and started mass marketing hatchery fish and today Coho have rebounded and have target fisheries on wild Coho. If we hadn't starting listening to our own dissenters, we would have never found it. We fished Coho to the edge of extinction and will spend the rest of life trying to fix it. Lesson is, if work in multi-layered

management organization; have people trying to be team players, every discretion is already distorted. Five hints: 1) be aware that bad news is late, investigate because tip of large iceberg, understand concept of systematic distortion; 2) cut through the layers, chain of command, organize field trips in district biologists to understand reality of the field, they had to think about whether they were going to trust me, cut through the layers; 3) identify the problems, nobody wants to be “the one”, celebrate problem identifying; 4) listen, reverse distortion personality; and 5) be prepared to act, be open minded. It is about the culture you create in your organization, the way we react to problem. We all have problems, create culture of problem-solving, not defending against political point of view; reestablish constituency contact. Believe in ideology over reality, but bring data. Future with fragmented habitat is a huge problem, but water is the biggest issue, etc. Reality is as climate change happens, have decoupling of a lot of systems (salmon – timing of going to sea). We have to be open to new realities, relationships are changing. New world is coming, reinvent, but we won’t do it if we don’t have a new brand of leadership and communication. Wisdom from Yogi Berra “it is what you don’t know that will kill ya...” *Ed Boggess, MN DNR* – Inspirational words of wisdom. Thanks for getting us back on schedule.

Director Group Photo

Awards Luncheon – Sponsored by Ducks Unlimited (David Brakhage, DU spoke; and Tim Sopuck, Manitoba Heritage Group).

Ed Boggess – Awards Committee Chairman Keith Sexson will present these awards.

Keith Sexson, Awards Committee Chairman, Facilitator – Introduced award winners and presented awards to state representative if winners were not present (*Exhibit 5 – MAFWA Winning Nominations*).

Law Enforcement Officer of the Year – Gregory Swanson, IN, award accepted by Gregory Swanson

Wildlife Biologist of the Year – John Olson, WI, award accepted by Cathy Stepp

Fisheries Biologist of the Year – Paul D. Calvert, MO, award accepted by Bob Ziehmer

Spirit of the Shack – Scott Walter, WI, award accepted by Scott Walter

Excellence in Conservation – The Missouri Stream Team, award accepted by Bob Ziehmer

Sagamore:

Marc Miller (IL) – accepted by Wayne Rosenthal

Jeff Vonk (IL and SD) – accepted by Jeff

Scott Gunderson (WI) – accepted by Cathy Stepp

Special Recognition:

Sharon Schafer, MI, Treasurer, accepted by Sharon

Northern Long-eared Bat (NLEB) Workgroup, award accepted by Scott Zody, IA

President’s Award – U.S. Fish and Wildlife Service, Midwest Region, accepted by Tom Melius

Desiree Erickson, MN DNR – There are fun outdoor things to do in Duluth if not doing tours tonight or tomorrow, we have recreation maps available, and hike trail maps available. *Ed*

Bogges, MN DNR – I want to recognize Cameron Clark, from Indiana who came in this afternoon. Kathleen Atkinson, Regional Forester, Region 9 of USFS.

Fisheries Management in Federal Wilderness Areas: Boundary Waters Canoe Area Wilderness Memorandum of Understanding Case Study

Tim Goeman, MN DNR Fisheries – (Exhibit 6) The wilderness area is 100 miles north of here; about 1.1 million acres make up the area and 12 streams. Fishing is a “major activity” in the Boundary Waters Canoe Area Wilderness (BWCAW) “a big part of experiences there”; 77% of overnight visitors and 63% of day visitors fished. Trout anglers value wilderness fishing locations and fishing in a non-motorized setting. There are highly sensitive coldwater fish such as lake trout, lake whitefish, and cisco that are vulnerable to the effects of climate and land use change. Deep, clear lakes within the wilderness will provide an important refuge from climate change for coldwater fish. The lakes contain some of the most important fish communities in Minnesota and on the North American continent. It is critical that we be able to monitor the status of these important fish populations to ensure their continued existence in Minnesota. There are 648 lakes where cisco have been sampled in Minnesota DNR surveys since 1946 (slide showed map). The challenge at the boundary area is that it is only accessible by trail. Fisheries management assessments were done in the 1930s with limited stocking since 1908 and limited spawn take. In 1964, Congress passed the Wilderness Act; and the boundary waters canoe area became part of the National Wilderness Preservation System which allowed some logging and use of motors. In 1978, Congress enacted the BWCA Wilderness Act, eliminating logging and snowmobiling, restricting mining, and reduced motor boats to a fourth of the water area. In 1979 to 1982, there was a challenge to the BWCA Wilderness Act by the State of Minnesota and others which was upheld by 8th District Court (big part of what we accomplished in MOU). The U.S. Supreme Court refused to review this opinion in 1982.

Sue Duffy, Forest Wilderness and Recreation Program Manager, U.S. Forestry Service
- The 1964 Wilderness Act preserved wilderness character, untrammeled and free from modern human control or manipulation. Natural ecological systems are substantially free from the effects of modern civilization. Undeveloped area is retaining primeval character and influence, without permanent improvements or human habitation. Solitude or unconfined recreation opportunities for solitude, free from signs of modern civilization. The 1964 Wilderness Act prohibits the use of motor vehicles, motorized equipment or motorboats, landing of aircraft, and other forms of mechanical transport unless permitted by the Secretary of Agriculture, which gives us that option if needed. Nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests. We went back and forth on this issue. The 1978 BWCAW Act provided for the protection and management of the fish and wildlife so as to enhance public enjoyment and appreciation of the unique biotic resources. Protect and enhance the natural values and environmental quality of the lakes, streams, shorelines and associated forest area (a phenomenal water resource). Wilderness Management and AFWA: Fish management activities undertaken pursuant to this MOU are intended to emphasize the conservation of natural processes, to the greatest extent possible. Management activities will be guided by the principle of doing the minimum necessary to conserve and, if necessary, enhance fish resources in a manner consistent with the wilderness designation of the BWCAW. We went through several minimum tool analysis, not the easiest way, but we came up with successful solutions and balances.

Tim Goeman - MN DNR/USFS History: 1986 AFWA agreement (1986 Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness) for fish and wildlife management in wilderness was signed. In 1988, master MOU between U.S. Forest Service and MN DNR “to work in harmony to protect and manage fish and wildlife habitat”. In 2003, supplemental agreements to protect and manage fish and wildlife populations and habitat in the BWCAW were signed. In 2006, new AFWA agreement (2006 Revised - Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness) for fish and wildlife management in wilderness (improvements, but issues with U.S. Forest Service). In 2008, DNR and USFS quit talking. In 2012, DNR and USFS leadership direct staff to develop a new MOU. The Path to Understanding, Facilitated Negotiation: People involved were a neutral MN DNR facilitator (a DNR staff member, but worked well), 10 staff members essential to management in the BWCAW (four very likely people, but all 10 needed to make the process work). Process involved: 1) engagement of agency leadership; 2) learned about each other’s mission and values; 3) interests-based negotiation; 4) identify broad agreement; 5) small work teams for technical, time-intensive issues; 6) department and Service review (lawyers involved on both sides); and 7) final agreement and cooperative meeting. Substance of the New MOU preserves wilderness values, which were not on top of my list as a wildlife manager, but no place like this wilderness. It uses the minimum requirement decision process, with a form that is difficult to fill out. It allows fisheries monitoring and management; considers employee safety with vigorous and hard labor carrying some distance, working out of canoes, and hypothermia. It establishes understandable criteria because in a few years, some people will not be working for the agency anymore so we laid out the history, and it promotes understanding, cooperation, communication, for DNR and Forest Service, previously looked at as adversaries, rather than a partner. Lessons learned along the way: MN DNR needs support from the top, set aside personalities, early on I talked to John Kennedy in Wyoming and he helped me with that and we were able to do that; and find common goals. One I mentioned was preserving wilderness values, own your mistakes, centered on staff in field office who went to do survey and wilderness ranger came along and they were working in non-motorized area with a motor, that information had not filtered down to field staff. Take corrective action, we adopted policy and took Carhart Wilderness Training course. To own the “resource” in truly collaborative way, we had to discover collaboration, make a few people understand what it really is. By the end we understood collaborative partnership, it was refreshing breakthrough.

Sue Duffy – USFS lessons: have upper level support, it was clear we could go to Brenda or Tom;, engage decision maker early and often, listen and ask questions; we learned so much about fisheries management in the wilderness, complex. We need to get into details and we were careful in terms of how we wrote the MOU; be open to different outcomes and we were surprised with outcome; and knowledge of wilderness, know how many portages and how far to carry versus flying in and knowledge of AFWA. On April 3, MOU is signed with lake management plans process, annual work plan; and a process established that is easy to follow. And relationships continue. *Ed Boggess, MN DNR* – Tim was not speaking hypnotically, he is retiring next week. AFWA agreement was extremely useful in this process, as well as tribal committee agreement.

Convention on International Trade of Endangered Species (CITES) and Other International Treaties: Implications to State Fish and Wildlife Agencies

Carolyn Caldwell, MAFWA (formerly with Ohio, MAFWA representative to CITES) (*PowerPoint - Exhibit 7*) – It is a four-hour workshop and we are going to do it in an hour, four people usually do this training. The Technical Work Group is giving regional workshop in each of the four regions and we are putting together a webinar, which will be shown on September 24, 1:00-3:00 PM with 100 person limit; email Deb Hahn at the Association and register. Have limited amount of handouts: Overview of CITES; Overview of Technical Work Group (TWG); and alligator, bobcat and paddlefish case studies (that are all available on website) (*Handouts - Exhibit 8*). Give overview of CITES, talk about two of the case studies on alligator and bobcat. CITES is an international trade treaty enacted in 1973 to ensure that international trade in specimens of wild animals and plants does not threaten species survival. The treaty was signed by 80 countries in 1973 in Washington, DC, with 180 countries now. Endangered is part of title, but is not a list of endangered species, like bobcats and parakeets are listed because they look like other species that are listed. CITES Mission: to conserve biodiversity and promote human development through sustainable and regulated international wildlife trade. How does CITES work? It establishes legal frameworks and procedures for prevention of international commercial trade of species. Regulates exports, re-export and import of live and dead wild CITES listed species and gives a certificate to go with the species. Provides data on trade. Species in CITES are divided into three appendices. Appendix I - are most imperiled and not allowed to be traded, 630 animals and 301 plant species on this list; Appendix II - trade is permitted based on permits and certificates, 4,827 animals and 24,419 plant species and includes similar species to those on Appendix I; Appendix III - includes species which a country asks the parties to protect, trade is permitted but tracked, 135 animals and 12 plant species on this list. Nationally CITES is administered by the USFWS International Affairs and came into being in the U.S. by Enactment of Public Law and Endangered Species Act of 1973. CITES and ESA listing is totally different, different processes and CITES is directly related to international trade. Some species on Appendix II I'm sure you recognize. The alligator snapping turtles and species of map turtles were added to track the amount of International trade. CITES is observed by CITES Technical Work Group, regional representatives who work for state agencies and directors and work in concert with USFWS, who try to work together. Process of TWG was implemented in 1994, and is more efficient and cost effective way for each state agency to be engaged. There are four of us, one from each region as well as Deb Hahn, who is our AFWA staff support.

Buddy Baker, LA Department of Wildlife and Fisheries Director (SEAFWA regional representative) – Thanks for allowing Carolyn to stay on after her retirement, she is our team leader and the glue that holds us together. Takes years to learn the process and we need to make sure our voice is heard. Carolyn has been on the team a long time and has established a good working relationship. You need to think about the next representative for the Midwest, someone with good policy skills and implementation skills. Our team prepared hard copy case studies for this meeting; on alligator, bobcat and paddlefish (*Exhibit 9*). Often these studies are misused by the Humane Society of the U.S. (HSUS) and other groups. On the alligator: when the International Union for the Conservation of Nature's (IUCN) crocodile specialist group convened the American alligator was no exception, it had been exploited since the 1800s; listed in 1975 in Appendix I. In 1979, the U.S. submitted successful proposal to down list to Appendix II, with implemented management; harvested inappropriately in the past. Highly regulated system of permits for harvest. Currently 2-3 million animals and sustainably harvested in most southern states. Alligators benefited through international regulation that helped certify it and gave it a market share. Today, have sustainable harvest, 1- to 1.8-million skins a year, the

majority are legal and regulated. Species accounts for 50% of the total world market share in classic crocodilian skins. Egg collections and wild alligator harvest is huge incentive to manage land. Protective of culture and want to see it continue. In 1982, prompted by Louisiana, Florida and Texas, along with the USFWS; an International Alligator/Crocodile Trade Study (IACTS) was done to annually collect world trade data on all crocodiles harvested. Protects our market share as well. In 1994, instituted a tagging program and universal tagging was established with the American alligator included. That tagging program is essential to be sure illegal animals are not getting into the market. Once a species is listed, it is not over for us, several issues come up that we are involved in such as downlisting proposals, range state quotas, which are countries not states, removal of reservations, trade suspensions or bans, personal effects; small leathersgoods exemptions, like boots or watch band can be brought in without CITES permit, captive bred and ranched specimens, electronic permitting systems and collateral impacts from snake or other reptile trade. We constantly need to be at the table. State agency involvement is critical. We can't afford for only four people to understand CITES, need state involvement to tell us what to do, which is part of the reason for the workshops. Include furbearer biologists, herp guys, etc. and see that they sign onto the webinar. Collaboration between state wildlife agencies, federal authorities and international organizations was critical to the alligator success story. We are having meetings constantly and work issues together. The animal rights agendas impact on CITES decisions and are not favorable to sustainable use of wildlife. CITES offers defense against animal rights interference, in California they instituted a ban on the sale of many wildlife products, which would have included American alligator products. Intense system of checks and balances in place. Same as legislation three years ago, that failed to pass by only one vote. Fighting battles for years, could lose overseas if not aware. Switzerland is one of those countries which would have led to the total trade ban on reptile products, like alligator skins used in watch bands made by Swiss watchmakers, which would have been a blow to U.S. trade. Kept focus on science and coupled with vision of economic incentives of commerce to benefit conservation and local communities, today known as sustainable use. Bobcat is a species that should have never been listed; listed in beginning of first conference, to be a hindrance to trading lynx. Criteria for being listed, was threatened by existence of international trade, but bobcat didn't meet that criteria. They are abundant in North America, wide range of habitats and increasing according to survey in 2010, with an estimated population of 2.3 million to 3.5 million animals in the U.S. Bobcat management programs in the U.S. and Canada are the most advanced management programs for commercial exploitation of any feline furbearers; as stated in 1996 IUCN wild cats status survey and action plan. The animal is not threatened, placed on Appendices because of political issues. Species are not hard to list, but very difficult to get it off the list. In 1983, the U.S. submitted proposal to delist bobcat. They claimed it looked similar to another species, but no official criteria was used. They did acknowledge that it would remain due to similarity appearance only. Treaty says, find non-detriment finding and pass down to your state furbearer biologists; first one came back negative, no proof. Hammered by animal rights groups, sent message that they would sue USFWS if anything done. The following year, states submitted enough data (no one knows how much enough is), initiate some state level harvest with quotas. Treated like an endangered species, leaves connotation that it is. Challenges and lawsuits from multiple states and AFWA. In 1996, through AFWA, attempt was made by the states to streamline the U.S. implementation process, but nothing occurred. States were required to build justification for participation in the CITES export program; justification of non-detriment and legal acquisition; and comply with tagging program administered by USFWS. Convened a panel

of experts, mostly academic; it said. “neither states nor recognized authorities on the status of bobcats were consulted before the inclusion of CITES Appendix II” and recommended “that in the future the U.S. national delegation to conventions affecting wildlife seek adequate prior consultation, ensure flow of information, and invite state and cross-agency participation to guarantee a balanced, biologically sound, and documented presentation by the US delegation “ to make sure biology in the program. In 1992, we created the TWG; in 2001, we tackled delisting again; in 2004, took forward to conference of parties (CoP 13) and was withdrawn because of mountain of mis-information that was put out; and in 2007, at (CoP 14), delisted proposal failed due to “look alike” concerns. We went home and developed a lynx ID manual, had meeting in Brussels to try and find out what similarity concerns were, looked at trafficking concerns. They constantly wanted to steer towards trapping. In 2010, delisting proposal at (CoP 15), got majority vote, but failed. We were not failing because of similarity issues, it was a protectionist issue. Looked at how to streamline this process. After eight years, USFWS eliminated mandatory tagging requirement only. We learned bobcat is not threatened, but political difficulties. The treaty has been used and misused to address a variety of political and animal rights agendas; and actions in CITES impose resource burdens on states and federal government thereby diverting much needed resources from other species in greater need of conservation Paddlefish is neither good nor bad, but it is current. Carolyn will discuss that.

Carolyn Caldwell – With paddlefish, hit key points. Unfolding, 10, 20 or 30 year process and it is early on for paddlefish process. For almost 100 years, 95% of caviar came from Beluga caviar. In 1991, when the Soviet Union fell apart, there was highly regulated harvest of this caviar production. This was big money, it was a free-for-all. With that we saw collapse of entire Beluga caviar market and in 1998, 23 species of sturgeon and paddlefish were listed. Between 2001 and 2006, dramatic increase for paddlefish caviar. Beluga caviar sells for \$6,800 for a small tin. In 2008, U.S. and Europe were two largest importers and exporters of caviar in the world. Raised concerns in amount of paddlefish being exported, U.S. had to show not detrimental to survival of species in the wild so that is why we are where we are. Global demand can impact agency resource management; state agencies and USFWS are working well together to collaborate on this, we are strong proponents of sustainable use. Significant amount of detail on this case study. We quickly walked through a four-hour workshop. Please sign up your staff to attend webinar. All materials are available online. *Buddy Baker* – Appreciate your attention, it is important.

Refreshment Break - Sponsored by National Wildlife Federation

Ed Boggess, MN DNR – Ambitious moose health study that was done.

Moose Disease, Mortality, and Habitat Use Research in Minnesota

Michelle Carstensen, MN DNR Wildlife; Lou Cornicelli, MN DNR Wildlife – Ed Boggess, MN DNR – Lou contributed some.– (Exhibit 10) – Moose numbers are declining in Minnesota; there are four subspecies in North America (a.gigas, a.mericana, a.andersoni and a.shiras). The moose range is shrinking and only moose in arrowhead region now. We have predators like black bears and wolves in Minnesota. The main diseases in moose are brainworm parasite carried by deer; winter ticks and liver fluke. Decline in mid-1980s, we had 4,000 and less than 100 in 2007; we found liver flukes and brainworm, mostly health related causes were reason for decline. From 2002 to 2008, we did a northeast radio collar moose study; we went out in a plane to locate dead animals, then tried to find them on the ground; tricky because they are warm and denigrate quickly. It was hard to tell if scavenge event or other event caused death.

Found quite a bit of mortality when moose should have been doing well. Average mortality was 21%, twice the non-hunting mortality rate of Alaska and Canada; in northeast quite a decline from 4,000 animals; much steeper than the northwest decline. Trying to figure out what is going on; is it how we manage the forest; predators; disease and parasites; heat stress related to climate – what is the cause? Current research is being done on mortality, habitat, moose-wolf interaction studies, and moose-deer interaction studies. It is not just in Minnesota, but in some New England states as well. Other states are seeing redistribution of species, etc. (showed a short video on that was on the CBS news: talked about Minnesota moose dying and no one knows why; talked about study. Northwest population is pretty much gone. Researchers in helicopters looking for species, found cow and calf, shot her with tranquilizer, set 20 minute deadline to get hair and blood species and install GPS through a radio installed in its throat. Weakening animals, parasites and having tools to meet challenges. May not come up with answers before they are all gone.) We have large mortality study, trying to get ahead with what was done, by attaching collars with GPS; try to get them to text us when they die, information texted to team, if moose down more than six hours; try to get to animal within 24 hours to determine reason for death. Mortality implant transmitters goes in the throat, it detects heart rate, (found error in transmitters and corrected calibration through satellite). Year one (2013), 111 captured, four capture-related mortalities, mean age 5 to 8 years. In first year, 83% pregnancy rate, 77% in 2014 and only part way through 2015 and 89% so far. Have a total of 168 individuals in the study and 61 that have mortality implant transmitters (MITs). Kills have been split between predator mortality and wolf kills, with category called wolf injuries, where we had a bite wound that was new route for bacteria to enter and eventually the animal died. Whole suite of health issues, like winter tick, brainworm, etc. Find mortalities when moose shouldn't be dying. Still able to get samples, of 16 wolf kills, in five moose there were health issues; four scavenged and unable to draw data; and seven were partially scavenged and samples did not point to any clear health condition. Look at age of moose that have died, 7.6 years, no difference with wolves, they take out all ages, but something underlying is driving decline. Try to get whole animal out if we can, but some are hard to reach and there are 1,000 pound animals, we wrap up and pull out if possible or do field necropsy where you look for everything you can. Unknowns remain and there are some complicating factors; we found lung tissue with cysts in one moose and looked at impacts of liver flukes, and found moose can handle damage without a clinical effect. Expand what we do through collaboration; send samples to a lot of different places, branching out everywhere we can to try and piece this together. Put out transmitters, started to learn we can do more than we expected. Summer wolf kill, showed movement of our first MIT moose in prior days; temperature shot up which showed being chased by wolf. How often can they survive something like that. Found moose on July 15 and showed movement prior to death. MIT showed spike in temperature when it entered the water. Looked at moose and temperatures in Minnesota, what is like for a year, looked at MIT data, temperatures indicated higher temperatures and lower temperatures when they were drinking, or in the water. A moose can lose heat four different ways. Current funding through state lottery dollars (LCMMR) which allows for continuation of adult and calf mortality studies and expanded use to obtain internal body temperatures. Looking at eight captive moose in Alaska, also inserted vaginal implant transmitter (VIT) sensor and looking at data transmitted. In some moose that have died, looking at moose data, in July wolf kill (54 dead) 30% of time temperature was over 102 degrees; found that in a number of cases. One had winter tick mortality because of low temperature shown on collar data. Where can they go when they are overheated and look at baseline data. On calf portion of study, collared cows,

catching calving behavior, cows making distinct move before they calved, showed stabilization, then move to have calf; data was spot on. Extremely high predator pressure on calves, 68% in study area. Look at how cow moves when a predation event, leave and come back to same spot shows when being chased; and identifying predator (bear, wolf or unknown). Moose in video (media moose) had triplets and as far as we know they are still alive. Ended moose hunting, and tribal agencies have followed suit. Other possible management options: decrease deer numbers, will hunters let us; predator control for moose recovery; habitat management relating to disease vectors; or do nothing. For thermal refuge or predator; what trade outs, what will we tolerate? Acknowledgement slide shows all of the people that have helped. *Keith Sexson, KS* – Are wolf and bear populations in that area increasing? *Michelle Carstensen* – Predation densities, some, 2,500 wolves, bears decreasing; can't say timing is lined up. *Keith Sexson, KS* – What was legislation? *Michelle Carstensen* – Media driven, death of five animals. *Audience* – Deer numbers up in that area? *Lou Cornicelli, MN DNR* – No it is down, managing deer versus moose versus wolves; which species do you value, pick your triangle. *Audience* – More prevalence for brainworm? Issues in eastern Kentucky, removal of vector like fire. *Lou Cornicelli* – Elk die, but moose less susceptible. More deer may mean more snails. *Michelle Carstensen* – Expanding range because of warmer climates. Change in mortality rate in 2013 and 2014 were really hard winters, so saw winter tick mortality; hard winters good for moose, but bad for deer as far as mortality goes.

Current Wildlife Health Issues

John Fischer, Southeastern Cooperative Wildlife Disease Study (SCWDS) Director, University of Georgia (Exhibit 11) – Like to go through quickly to have time for comments from local biologists. Feels good to get back here even though I left in 1966. Gratified to hear no more movement of elk out of Wind Cave National Park, an important decision, trying to establish criteria for moving captive deer and elk. Thanks Michelle and Lou, did study in whitetail deer, saw bobcat kills of adult deer, but saw medical reasons present. Current wildlife health issues showed map of area we have members in, but we will help anyone, anywhere, anytime. We added Kansas in 1987, Ohio in 2004, and Oklahoma and Massachusetts in 2010. A year ago I was able to attend MAFWA Wildlife and Fish Health Committee meeting and want something like this in the southeast, SCWDS is upper administrative level; and want members of SCWDS states for Wildlife Health Technical Group to discuss individual issues and shared issues; develop regional approaches and discuss how SCWDS can help, from development to research. Annual meeting in Georgia in August and we have travel money for SCWDS states. Texas is member of Southeast, but not a SCWDS member. Four states here are members; two have assigned a technical group member, will ask other two to send their person to Athens. Chronic Wasting Disease (CWD) detection in Michigan in wildlife deer at end of May in Ingham County, a number of deer have been collected in that area. *Bill Moritz, MI DNR* – We have taken about 110 deer in that area and no positives. *John Fischer* – CWD research showed aerosol transmission can occur, used 1/20 of what can occur; also appears in dust. Another study, vertical transmission in Muntjac deer model. News about vaccine trial, five animals inoculated and one still not positive, four did develop CWD and died or were euthanized; one deer extended for 300 days, a small step forward. Human susceptibility, work done with transgenic mice, deer tissue is implanted (Franklin-mice); in February researchers identified, “amino acids constitute substantial structural barrier to CWD transmission to humans”, in May, re-analysis and found in 2 of 140

mice, happy not a much larger number. Paper will be published in August. No strong evidence that CWD is transmissible to humans, haven't heard of revised statement from CDC. Another area we have been hearing about is plant uptake, abstract done in 2013 at TWS meeting, paper was not presented, agent from Wisconsin, taken up by alfalfa and tomato plants and maybe one other plant. Other research done with different protocols used. Paper from Texas came out that grass plants can find it on the surface and transport the prions. Continues to be a broad area, not much development on live animal test which will be necessary to move live animals around. Rule from USDA finalized in 2014, certification can be received after five years of age on farm where tested for and not found for one year old on farm for herd to be certified low-risk; no testing requirement if animals die off farm in facilities not in CWD program unless state requires it. Since 2007, traced back to certified-free herds, not just free for five years, but 10 and 12 years, one of those was red deer in Iowa. Detection occurred after money played out for CWD, percolated for two years four animals put down, almost 300 animals positive there and shedding in environment, situation tough to deal with. Wisconsin DNR ended up purchasing property and had to keep wild deer out of enclosure. Another positive herd found in April 2014 in Pennsylvania, dispersal sale in 2013, 80 animals went to 40 facilities in Pennsylvania. Deer shipped to 9 states, 7 in this Midwest area and traces found in another Pennsylvania herd that had sent animals out to four states with three of those states here. In Ohio found in 2014, quarantined since 2014, because of known connect to captive herd in Pennsylvania, six escaped with two of those in affected pen, but tested positive and were killed. Where was deer exposed to CWD? A lot of pointing fingers and you have to have thorough studies. *Scott Zody, OH* – Official positive was in hunting preserve pen, since tested and found in two breeder pens, depopulated one of those, probably other one too. In June one found in Wisconsin, 7-year old doe died on breeding farm with 167 deer on 12 acres. *Tom Hauge, WI DNR* – Newsworthy from disease perspective, in western part of our state north of our endemic area, 150 miles south of Duluth. Captive herds controlled by Department of Ag. our own role was to make sure fences are intact. Haven't decided what to do, president of deer farmers association was owner. Deer was certified and investigations will be important. *John Fischer* – Does Wisconsin require testing of animals shot in shelters? *Tom Hauge, WI DNR* – Not 100%, maybe 10% have to be tested. *John Fischer* – Map shows red dots that are existing herds, yellow is depopulated herds, a dynamic situation. In view of CWD detection in certified herds, USAHA requests that USDA "...assemble, analyze, summarize and make available all pertinent info from epi investigations of CWD in farmed and wild cervid herds." Some of the information to include prevalence, demography of CWD and negative animals, duration of monitoring before first detection, number of animals tested and not tested, and trace forward or backward for results. Resolution was adopted unanimously, deer and elk farmers were in favor of this too. Switch to HPAI, we are near epicenter. Avian influenza virus, low path, high path only in South Africa, but found in wild birds in 2003 in Asia, Europe and Africa; and in 2005 and 2006 (N5N1) found in Europe and Africa. Found in North America since December 2014, with no association to human health issues. Viruses mix genetically and result is mixed path (Eurasian H5N8, etc.) Have it in wild birds for first time ever in North America, biggest numbers primarily in domestic poultry Minnesota, 108 facilities, from APHIS website, primarily turkeys; laying hens in Iowa, 75 facilities; South Dakota, 10; and Wisconsin, 10; body count 223 domestic flocks affected, 48 million birds died or were euthanized, 15 states affected. New detections have slowed and a month since anything new in Minnesota. APHIS-VS statement indicates detection may increase this fall as waterfowl migrates and see mention of flyways. Found in gyrfalcons and great horned owl; cooper's hawk in Minnesota and another

state, snowy owl, red-tailed hawk and bald eagle; and wild waterfowl in several species. Viruses detected from SCWDS and could not find any other apparent cause of death. Picture is muddy on what is really going on here, need research and addition resources to get that work done. Not aware of any isolations, no reason to suspect susceptibility to infection and clinical disease would differ from domestic turkey. Exposure of wild turkeys hard to control; what do we not know? Can't say how it will impact wild species, we don't know likelihood of establishment and persistence in wild birds, interaction/assimilation with established diseases, spread in North America; how to track spread; don't know how it got here; and rule out possibility of human detection. A lot to learn about it. Ask Lou to come and tell about his experience in Minnesota.

Lou Cornicelli, MN DNR – In late February got call that it was AI was found in turkey barn. Read in the paper that it was probably shore bird going in the barn; but no shore birds at that time of year; looked for waterfowl in the area, found 100 mallards six miles away, but found no HPAI in them. Burmese vaccination crew was in the barn a couple of weeks before this event. One of the things we were doing was chasing the infections, trying to use Google earth to find the farms. Looked at case control and got 1,500 samples within area and 1,500 in water management areas; found low path, but no high path. Also did some dead bird studies and found a cooper's hawk that tested positive 10 miles away. Look at serology and tested 500 geese scattered around the state, looking at test results; under a lot of pressure. Partnering with other groups to do study.

John Fischer – One other thing we don't know, how did it get into 108 facilities in Minnesota, 75 in Iowa and 10 in some other states? Were poor bio-security used in these places? Some barns were holding tens of thousands of birds; what would it take for you to hunker down and pay attention to that?

Ed Boggess, MN DNR – Dr. Fischer gives a lot of information and insight. On avian influenza, need to get good data and see where it leads us. Not everyone is doing that, but we can; integrity and professionalism can take you a long way.

Depart for Field Trips 6:00 pm, sponsored by Brandt Information Services

Orientation and Historical Background – *Tim Goeman, MN DNR Fisheries*

Saint Louis River Estuary Boat Tour – *John Lindgren, MN DNR Fisheries*

Hospitality Room – Sponsored by Pheasants Forever

Tuesday, June 30, 2015

Breakfast – Sponsored by Archery Trade Association

Constitutional Funding Panel

Ed Boggess, MN DNR, Fish and Wildlife Division – (Exhibit 12) - Minnesota gave themselves a 25-year gift in 2009. Introduced Dave Zentner (Ducks and Wetlands rally leader). Citizen led effort is what I want to discuss first. Introduced Mark Johnson (current director of Lessard-Sams) and Grant Wilson (principal planner and liaison to the Council). What led up to this, what it entailed once it passed, competition for dollars and what has been accomplished the first six years. State has to pass constitutional amendment that then goes on the November ballot, five amendments since 1988. Get legislature to agree to put it on the ballot, Governor can't veto it or anything else. At the end hear from states that have dedicated funds, like Missouri, and Iowa who has authorization but not money. It takes a grass roots effort to go anywhere with this.

Dave Zentner, Past National President Izaak Walton League of America and Chair of First Ducks, Wetland and Clean Water Rally – (story – I love to tell the story...) How did it happen and work? Some good luck and hard work. You have looked at a long sad decline in funding at state and federal level, monies to take care of the natural resources, water and earth. This was the vision of a few, but a commitment of many. This is about community, and needs to continue to be about communities staying together. About legislative democracy; brought vision, price of progress was having a toll, wetlands 90% gone. Minnesotans got it. Not least of challenge was changing the constitution. Asked Walter Mondale for help to pass the amendment, he didn't want to help with amendment to the constitution, but said he wouldn't say anything bad about it or oppose it. Preceding history, but not enough time. Economist, outdoor editor, Dennis Anderson, a biting writer, but had a vision; he put together a series of essays before first rally about empty skies – losing skies, wetlands and reduction in water quality; empty skies referred to lack of ducks. Asked for rally at the capitol. He was a bird watcher, Earth Day 2005, 30 organizations with 5,000 to 6,000 people; duck hunters and birders side-by-side. Another outdoor writer Ted Williams, in a series of essays, said what if guns and dreams could work together, same assets facing everyone, and we were allowing defeat. Had great leadership for second rally, guns and dreams. NGO that had 20,000 members in Minnesota or less had equal weight in votes. To keep press in the room, people had to be in the room together. Another critical thing, I don't belong to Audubon, or member of BF, no organization; but this looks good to me; ended up being some of the bigger players. Needed new skills to run a campaign, thought we needed five, but we had three. Ken Martin, political activist we hired him to run our staff, he knew politics district by district; even knew people like me. Drove to St. Paul and sat down with Ken, thought we were right where he thought we would be in 2008. Another illustration of his magic was when Mark Johnson at one point members of sporting community (hunters and anglers), John Swartz came to me and said we need citizens council put in place before 2008 election, said they would oppose it if we didn't have that. Got cross section of guns and dreams together, Harvey Nelson, Mark Peterson, worked a hybrid of citizens and legislators together. Formed Lessard-Sams Outdoor Council which was critical to our success. Minnesota is a special place, we spend more time keeping what we have than expanding. Invited everyone to meeting, stated we knew that you seen it, what is the instruction and where do we go? To leave a legacy in 2034, think big picture, water-based, science-based...outdoor legacy. It was harder to do that than pass the amendment. We formed dedicated funding working group, doing a pretty good job

of hanging together and putting outcomes on the ground. Planning a retreat on where we need to go in 2034. It is up to us to get the job done.

Ed Boggess, MN DNR – 3/8 of 1% sales tax dedicated to four funds (1/3 for Outdoor Heritage Fund that we are going to focus on today, 1/3 for clean water includes sanitary districts, etc. 1/3 for Art and Culture Heritage). Article in outdoor newspaper, art and culture heritage is invigorating communities on Lake Superior, where people go when they want to go outdoors; add art or amenities in those towns. Started out at \$90 million, closer to \$100 million now.

Mark Johnson, Executive Director, Lessard-Sams Outdoor Heritage Council –

Pleasure serving on council, a handful of people. Outdoor Heritage Fund is only portion of the funds we make recommendations for the \$100 million to the legislature and they appropriate the funds. Council is in statute and well regarded because of the process requests for funds go through. Last year, passed funding and receiving \$100 million for 2016. Those monies would not have happened, small cog in the wheel when working on the funding requests, got the 3/8 of 1% sales tax. Without Clean Water, Arts and Cultural Heritage, and Parks and Trails this funding would not have happened. What about 2034 when this sunsets, no one knows, hope for renewal of the funding. Your state needs to look at trying to pass an amendment like this, you are missing out if you are not. I will be more than happy to help as well as Council members; important for your states. (story – visiting sisters, moved from Grand Rapids to Twin Cities, live out of town, chorus of frogs scared them, dumb founded with all the night sounds) We have lost all of that today, tell the story of the successes in 2035 or we will not have that funding again; get everyone involved.

Ed Boggess, MN DNR – Monies come to DNR, not just fish and wildlife division.

Grant Wilson, MN DNR (Liaison to the Lessard-Sams Outdoor Heritage Council –

Operational how funds function. (slide on Lessard-Sams Council, competitive appointment process and DNR accomplishments slide). From land acquisition to prairie restoration, accelerating programs that have already proving successful and on a larger scale. First was Upper Mississippi – UPM Forests, got 190,000 acres, one of the first projects out of the gate (just one example). We apply for and spend dollars. One of the Conservation Partners Legacy Grant program, build capacity across local communities, started out at \$4 million, now \$8 million, anyone can apply for this money, DNR administers that and staff helps folks identify pieces to help get started. Receive administration funds, DNR get dollars and sign contracts with the nonprofits to ensure work is being done properly. Support partners on projects they are completing. We meet annually. Scale and scope of work could not have been accomplished without these funds.

Ed Boggess, MN DNR – A lot of benefits flowing to DNR comes from nonprofits who get grants to restore wetlands, etc. *Bob Ziehmer, MO* – Thanks for remarks, disagree with “this is the best state in the nation”. Background on funding sources for Missouri, 39 years for dedicated funding, makes up revenue, 94% to 96% of revenue, 60% sales tax, (1/8 of 1%, for every \$8,000 we receive \$10); 19-20% from sale of hunting licenses, and remainder PR/DJ funds. You have to recognize, Missouri is 6 million strong in population; Missourians trust enough to invest in Missouri conservation. Investment and trust occurs in urban and rural Missouri. Actively recognize our conservation family is large and diverse. Invested where the people are and invested in people and the wildlife; urban centers and nature centers in urban areas. We have 12,000 citizen volunteers in any given year, run nature centers and shooting ranges, etc. People are more important than the dollars, keep them engaged. Dedicated funding does not mean immune from economic downturn, \$110 million for this year. In 2010 \$103.3 million, two years

later barely \$97 million. Passed in 1976, live within our means and don't mismanage funds. Wise investments and some similarities "Design for Conservation" is our name. Promised to invest in land that we would hold in public trust, a lot of capital investments for long-term maintenance, maintaining 75 shooting ranges and when wetlands have pumps that go out; help them remember investment is maintenance too. Cast management net broad, we manage all wildlife; quality habitat, regardless if game or nongame species, both sides benefit and both sides win. Let public know, and don't apologize that conservation brings more health, happiness and prosperity to a state than people realize. Supports short of 100,000 jobs, participation numbers are off the chart; give the truth and facts. *Ed Boggess, MN DNR* – Over the years some of your staff helped us here in Minnesota and we appreciate that. Our Outdoor Heritage money is only for habitat. *Dale Garner, IA* – Status in Iowa, looks good on paper, but no money so far; passed a couple of years ago and Missouri and Minnesota helped us as well. About 63% of Iowans passed it, DU was proactive, as well as PF and other conservation organizations; funds will be 3/8 of 1% the next time we have a general sales tax increase; none passed yet. Bill came up this year and on the books for the next two years. On Senate version 23%, House version was 15%; it will be interesting to see how all that works out. Obviously we would like more, supposed to be additive, but we will see. Could affect parks and others who receive SGF more than fish and wildlife division, who does not receive state funds. *Naomi Edelson, NWF* – When led funding campaigns, this is most important; encourage our affiliates and help if you want to take this on in your state; partner with all of you and happy to help. *Ed Boggess, MN DNR* – We had help of several NGOs who helped too.

North Shore Fisheries in a Changing Climate

Ed Boggess, MN DNR – Olivia is expert on climate change – advisory committee on climate change and resource science member – working with our staff on how to work on climate change. A number of trout streams on north shore, important to them.

Tim Goeman, MN DNR Fisheries – (*Exhibit 13*) – Misconception that there is nothing we can do about climate change. I will give summary of what fisheries are like and Olivia will give you tools we are using. On north shore, a lot of trout waters that are tributaries to Lake Superior and Wilderness area too. Originally primarily brook trout water, an important part, but introduced rainbow and brown trout and have salmon. Handle on who uses the fisheries, 31% use Lake Superior and its tributaries and we sell 100,000 trout stamps a year. These streams have important habitat limitations like stream flow, fed by surface water runoff, some freeze solid to the bottom in the winter. Lack of groundwater, slight changes in temperature can stress trout or even be lethal. Graph shows stress conditions and lethal temperatures of steelhead in the Knife River. The point is there are already times during the year when fish are stressed or in near lethal condition.

Olivia LeDee, MN DNR FAW Policy and Planning – Changes are underway, over last 30 years winters are much warmer, not below 30 degrees most nights; increase in rainfall 1-2 inches more, changes in stream flow, etc. and continue to see changes. Fish managers contracted University of Minnesota-Duluth to do vulnerability assessment a few years ago; looking at future water temperature, flow and other environmental factors. Looked at species at risk if temperatures were over 65 degrees and gone if over 65 degrees. From stream graphs, on lower shore there are already some of the streams that are marginal; up the shore (lot of urban area), middle portion mix of green and red, but some more resilient; higher to upper shore where cooler temperatures, will continue to support brook trout. Shore-wide some streams more resilient than

others, lower no longer support and upper will. Current actions may reflect short-term investments to look at those that will no longer support trout. Have information but it doesn't tell you what to do. Looking at birch die-off. Using scenario planning, a tool to consider possible futures and identify strategic decisions; we are using royal Dutch shell as example; started this process and we are increasing the use. Liken to fighter pilot, a tool to identify plausible scenarios. Brought folks together in a workshop and focused on areas with uncertainty (climate change does not fall in this category); looked at conceptual network, PEST+ analysis and quadrant mapping. Created five narratives when we brought the group together: disease outbreak, no known source; mega drought; increased timber harvest; shift to clean water and non-angling interest; and best possible future.

Tim Goeman, MN DNR Fisheries – We have field staff, but to drop what we are doing now to manage for changing climate is not reality, chip away at challenge and move in the right direction. Develop a priority system. Some of the streams won't be trout streams in the future so don't spend money on those that will not be trout streams in the future; look at those that might be long-term trout streams. Another action item was to fill gaps in terms of data; like developing an inventory of culverts that are limiting fish passage, failing or blocking sediment. Creel surveys on inland lakes and reference work the University has done, 40% trout anglers feel that is most important area we have, supplement demand to those inland lakes; temperature and oxygen monitoring on inland lakes. Increase staff training on timber management like foresters attend, be able to communicate better. Know emergencies are coming related to climate change, have invasive species, etc. Have a plan in place that will lay out how agency reacts when it shows up. Reduce risk; we have not done that yet, want to ban felt-soled waders like other states have done to not carry invasive species. **Olivia LeDee** – Recap to identify durable streams on north shore, manage stream systems and watersheds to increase long-term effect, prepare for potential problems and engage with partners, anglers, decision-makers and the public. Why now why not wait? Seeing impacts now, the earlier we plan and intervene the less it will cost us. Trying to achieve resilient habitats that can adapt to stressors and continue to support fish, wildlife, plants and people and that are flexible into the future. **Tom Hauge, WI DNR** – Focusing on durable streams tells people their favorite stream isn't important? **Tim Goeman** – Have not spoke with those folks, but important that we do that, (analogy - medical team could to great lengths to keep the respirator going, but full recovery is not going to happen); we pour money down a rat hole before we quit, draw the line at a reasonable place and make the changes. **Dale Garner, IA** – Will trout groups be able to apply for some of those funds? When you designate which ones are the ones to work on, who will tell local trout groups no money will be spent on that? **Tim Goeman** – Working on that now, some groups who have gotten monies and spent money in places we would not have spent there. Come up with list of priority waters so Council can award to those groups first. Explain why we have that system and have same focus. **Dave Zentner** – A lot of conversations, rather than focusing on brook trout; focus on the watershed and its connectivity. Explain and show hydrology, private ownership. Rather than specific species approach.

Monarch Butterfly Initiatives

Tom Melius, U.S. Fish and Wildlife Service – (Exhibit 14) – Thank Ed for moving this forward at AFWA last fall. Dan Ashe formed a high level working group to look at monarch conservation. The magnitude of the impact to the population, and it was that precipitous decline of over 90% that urged Director Dan Ashe to issue his call to action last fall. At its 1996-97 peak

the continent's eastern monarch population was estimated at more than 1 billion butterflies; this year the Mexican overwintering population was only 56.5 million butterflies gathered on fewer than three acres. Challenges and objectives are to rebound to 225 million butterflies by 2020. Leadership working with three countries on trilateral committee, adopted at AFWA with MOU, working with National Fish and Wildlife Foundation which is leveraging \$1.2 million with growth to more than \$6 million budget to help with habitat on-the-ground and organization capacity to move forward with enhancement and restoration activities. Over 200,000 acres to be restored habitat, NRCS is also restoring habitat and will invest up to \$5 million. Working with USGS and the Powell Center who has formed a Monarch Science Partnership, on national inventory with Natural Resource Program (part of National Wildlife Refuge System) and working with the people on communications campaign, NWF, and over 750 school yard habitats and pollinator gardens. Map showing priority geographies, early spring move out of hibernation in Mexico to Texas, first generation keeps moving; second generation lives about 6 weeks and third generation moves to corn belt, lay 300 to 400 eggs on milkweed and new generation flies back to Mexico and restarts cycle. Had petition to list this as an endangered species so that has also raised our awareness. Want great habitat in Texas and Oklahoma, then in cornbelt to plant milkweed and hopefully bring more butterflies back down to Mexico. Also western population exists in California, but they rarely fly to Mexico. In Midwest, develop 50,000 acres using private lands, FWS lands and right-of way acreages. Look at youth and community involvement with student groups in urban refuges; in St. Louis "milkweeds for monarchs" is already in place. We plan to move forward with SHC activities and adjust if needed; build additional partnerships, PF excited about habitat restoration going on-the-ground; it will take all of us to reach this goal of 225 million in next five years when only at 50 million now. Opportunities include pollinators in SWAPs; collaboration with other state departments, highways/transportation; and research with universities and cooperative units. Have a Monarch Joint Venture, which I am a member. Great opportunity for organization.

Naomi Edelson, National Wildlife Federation – Severe need to restore monarch population. Incredible opportunity to do this. Wildlife biologist myself, worked at AFWA for 16 years leading Teaming with Wildlife, which resulted in over a billion dollars. NWF is devoted to monarchs and signed MOU with USFWS. Reach out to people where they live, work, play and worship. Capture people's imagination. Regional coordinated strategic plan from Texas to Minnesota, and we hope that MAFWA will support this with PF, among others, who will take the leadership. Pheasants Forever is working on pollinators and changing seed selection to include milkweed; looking at changing milkweed name to monarch seed. Hardly ever have a President of the U.S. to call for action on a species. Everyone at the table and Department of Ag. wants to be proactive and actually have money tied to this; \$8 million so far, a couple million on the table so far; not sure of money amounts. Rare opportunity for MAFWA to tap into that, think big, but more importantly act big. People love monarchs more than any other species, learned about it in school, and it generates interest. Need to grow milkweed and other pollinator plants. Do in this part of the country; many different types of land, urban to rural, large and small acreages. Along I-35 corridor, could plant in church yards, public to private; not hard for people to do. There are 95 million gardeners in the country and we can give them something to do. Strategic coordinated effort in this region. Two-phase effort tied to funding possibilities. 1) Start with workshop to share the latest science and what other states are doing, in the fall to put together with existing money out there; 2) MAFWA, or another organization, put in for \$250,000 grant from NFWF with deadline of July 15; 3) have spring meeting to share items for regional

plan, what people might do; then apply for second proposal a year from now to grow and distribute milkweed and planting. Figure overall acreage and decide how many acres in each state and work our way to the numbers Tom is talking about. Include regional coordinator to make all of this work. Last part could be initial funding to mimic what is happening in Iowa, Missouri and Texas. (1-spring meeting, 2- regional coordinator, 3-coordinate funding). This is the right step for all of you to be those players. I will be happy to work with you, Rick Young and Howard Vincent, Pheasants Forever, will be happy to work with you and Jon Mawdsley, AFWA, will help too. *Ed Boggess, MN DNR* – Potentially important item at business meeting tomorrow. *Kelly Hepler, SD* – Different perspective, 120% behind this; asking questions our Governor and Department of Ag. are going to ask me: What does it mean to me? Make state-by-state, rather than federally endangered? Hit 225 million butterflies, will that be collectively? Will that keep them from be listed? *Tom Melius* – No way to change from row crop production to pollinator habitat or monarch plants. Will 225 million by 2020 preclude listing? I don't know, working on that; is science going to tell us that that is more than what we need to sustain population. *Jim Douglas, NE* – Think my understanding is that Ag. companies want positive dialog about this subject; how do we communicate to Ag. sector. Intuitively makes sense that MAFWA take some leadership role in this because of geography and some of things states are already doing. Gain from conference this fall and follow up next year. Hard to ask for funding since match requirements of 1 to 1. In perspective in three phases, come up with match pledges before July 15 and funds to accomplish all three or go as far as you could with monies. *Naomi Edelson* – Already good work going on, match goes back to March 2015 and anything states are already doing, but not federal funds. Amazing organization that puts things on the group. *Rick Young, PF* – Can come up with \$100,000 match. Preliminary discussions, confident we can come up with \$250,000 match in next two weeks with help. *Naomi Edelson* – It can be in-kind, not all cash. *Bill Moritz, MI* – Is this a \$250,000 project or \$500,000 project, asking for \$250,000 from NFWF, a couple rounds of money, 90% chance of getting the funding too, but I don't make the decision. *Larry Voyles, AFWA & AZ* – Work on wildlife areas in conjunction with what we are already doing, but hard to come up with actual money that is not federal dollars. Integration of funding sources, National Fish and Wildlife Foundation (NFWF) is coming up with money, avenue is grant process or mechanism for different kind of funding to pull together package to deliver funding on the ground. *Naomi Edelson* – In proposal, RFP talks about coordinated effort in state wildlife plans. Talked to Jeff Trendal about this, something AFWA and MAFWA could have that conversation and NFWF would be happy to be at the table. Some conversations like that already occurred; encourage state involvement. *Dale Garner, IA* – Concern on Ag., we are Ag. state; we began discussions in spring of 2014, got president on board for wildlife species, but we have Governor on board as well, Iowa State, our department and Ag. department on board already as well as farm commodity groups and Farm Bureau. Ag concerned with how effects them and Iowa Consortium has heard that already Have outline of what to cover in workshop whether the rest of you are going or not. We send support letter as well. *Ed Boggess, MN DNR* – Potential things that could happen, but short timeline on this. Last year voted to do NLEB workshop and pulled it off and was successful and helpful. Good track record to pull on in short order and state volunteering to host (Iowa); \$250,000 grant with 1-1 match; question is what will be in proposal that is due two weeks from tomorrow and who is going to submit it. Encourage more discussions before tomorrow, have fairly detailed idea on what we want to bring forward. Workshop is feasible whether we get a grant or not, if you all agree. Written document is maybe something I am suggesting, something we can all see, debate and maybe edit.

Association of Fish & Wildlife Agencies (AFWA) Report

Larry Voyles, AFWA President and AZ Game and Fish Director – Humbling to travel country and visit regional associations, struck home when heard challenges state directors are having. Important understanding of people in communities we deal with and how important that is to surviving and thriving; and courage of directors who face those issues. Welcome you to Tucson in September, theme is relevancy and how we connect with those communities that make a difference for primary topic. Bring swimsuits it will be warm and bring golf clubs and closed toe shoes. As Ed pointed out, working on telling the states' story; survey work going on, 42 states with solid information and folks getting individual phone calls because states are crafted different. Questions in survey, find myself in conversations often where that information is important. Asked question on shooting ranges, 38 states reporting, but extrapolation may be as many as 450, just less than 500 ranges, which would make a difference to some of our partners. That information will be important on many fronts. Completed another coordination meeting with USFWS, SAFLO II in Montana and looked at collaborative efforts, maintain and continue historic partnership and challenges that face us are daunting, but integrate federal and NGO partners with efforts of the states. Lot of work on reauthorization of the Sport Fish Restoration and Boating Trust Fund, time is running short, see how it plays out. On back end, find common vision. AFWA is looking at ESA petition rule, just a general look and have legal committee looking at it. Recognize and appreciate the Service in their role on this, most things handled in the way that rule is crafted, may need some tweaking. Held first meeting of Blue Ribbon Panel, Bob Ziehmer is leading that charge. **Bob Ziehmer, MO** – We talked about dedicated funding this morning, looked at landscape and successes we have had especially with game species. On doorstep of 21st century looking into the future need to look at key habitat types, bear huge responsibility to citizens for today and future generations, to have abundant and robust areas. Key point for long term success, how do we ensure access, handle disease, invasive species, insure water flows; a lot of challenges. Require additional investment to insure success, time and dollars. Need to start having those discussions; 3 million citizens in U.S., have conversations more fully recognizing their responsibility as citizens to help us manage appropriately. This venue through communication efforts to educate on challenges and how they can be part of the solution. Looking for opportunities to move forward, additional investments this country can make in addition to ones made in late 1930s when sportsmen and industry came together; no less daunting today, but do better job of starting the dialog to come up with funding opportunities. First meeting held in Colorado and started brainstorming, why need for panel and what to explore and had action items. AFWA is pulling the big wagon, setting up listening spots. Best thing we can have is candor, next meeting in Missouri in Branson in September. **Larry Voyles** – Copy of AFWA strategist, highlight of things going on recently has been handed out (*Exhibit 15*). Trying to shore up foundations in AFWA, our voice on the hill and be a presence and relevancy in the district and public opinion. As you see those themes try to make our actions support that.

Ron Reagan, Executive Director – Thanks for hospitality, great to be part of activities you always make us feel welcome, trusted and supported. Thank Larry Voyles, served under different presidents with different styles; he is helping me grow and he has personally invested his work and time in the work of AFWA. Fair number of staff here, introduced Jonathan

Mawdsley, Davia Palmeri, Carol Bamberg, Parks Gilbert and Dean Smith, also contracting Jeff Vonk on his survey. Fuller than we can do justice too. New employee, Dr. Judith Scarl, new migratory bird coordinator. Looking for MAT summer courses at NCTC and looking to fill Farm Bill coordinator position. Moved office, a few minutes further away from the capitol, but not so far as to not justify saving over \$1 million in rent over the next five years. Strategic Plan expires in December of this year, rather than write whole new plan, tweaking and calibrating this one; plan to do at retreat for two days in Idaho. Bring revisions to all of you at annual meeting in Tucson in September. Sustainable funding models is something we will be looking at; an AFWA future, from business perspective, how to spend savings in rent; also close to \$2 million in the bank and start generating some income by entering those funds into the market. In good financial shape and need to plan for the future.

MAFWA COMMITTEE REPORTS

Ollie Torgerson, MAFWA Executive Secretary, Facilitator – One thing, all registrants will get survey from DMEM to help us on planning our meetings. Please fill it out and send it back in. We have 15 committees, who function as work committees, they meet independently generally, but had legal and law enforcement meet with us here this year; and host state members usually give committee reports. Sheila printed the committee reports in your document in order of what is on program. Brief reports, but that doesn't mean they don't do good work and do heavy lifting for this Association.

Aquatic Habitat Conservation Committee (Exhibit 16) – Ollie – The Midwest Aquatic Habitat Conservation Committee was formed at the annual meeting in Kentucky in 2013 at the request of Chuck Corell, Iowa. At that time it was requested that the committee be formed to allow the fisheries chiefs an opportunity to become more involved in the Midwest Association of Fish and Wildlife Agencies and give them an opportunity to discuss fisheries issues. It was moved and seconded to add the committee to the bylaws. However the committee has never really seemed to get off the ground. No meetings have been held and the committee will sunset in 2016. Joe Larschied has asked that the committee be disbanded because of lack of interest. Need to call for a motion to disband and we will work through bylaws committee. ***Mark Reiter moved, Scott Zody second. Approved.***

Climate Change (Exhibit 17) – Olivia LeDee, MN DNR – Held quarterly phone meetings, with seven states participating. Effort to focus on this year. Priorities across the region. Identify 2-4 regional priorities, terrestrial and aquatic. Result is four topics (two aquatic and two terrestrial): 1) Assess the impact of climate change on lake systems and fish habitat; 2) Assess the impact of rising stream temperatures, altered flow connectivity, and inter specific interactions on macro-invertebrates, including mussels; 3) Evaluate habitat restoration outcomes under extreme weather events and climate change; and 4) Assess the response of deer, moose and elk to get the direct and indirect impacts of climate change. Appreciate any direction you can give us.

Deer and Wild Turkey (Exhibit 18) – Gino D 'Angelo, MN DNR – Purpose is to disseminate and look at current issues. Members thank directors for allowing them to attend this meeting; the most important one I attend. I can connect with fellow biologists and here current issues relevant in each other's states. Hosted last year in Potosi, Missouri; 53 attendees from 13

Midwest states and other organizations as well. We had a presenter who advocated for reframing lead. Also discussed disease management and monitoring, especially CWD in captive cervids. Alternative monitoring on deer and turkey populations, lacking in some areas and how to fill those holes. There were also a number of breakout sessions discussions. The business topics included how to maintain a website when members change year to year and the possibility of having a webmaster to maintain the site. The next meeting will be held near Mirror Lake in Wisconsin.

Feral Swine (Exhibit 19) – *Ollie* – Chad Soard from Kentucky stepped down as committee chair and Steve Backs became chair. *Lou Cornicelli, MN DNR* – Not on committee, but it was formed in 2014 to deal with feral swine issues. One action item was tabled, to begin development of a broad Midwest feral swine management plan based on sound scientific and proven methods; due to the dynamic and increasing efforts of USDA APHIS in the National Feral Swine Damage Management Program. In 2-3 months the APHIS feral swine EIS is expected to be finalized including a national management plan that will provide a more solid foundation to relate to state efforts and effectively develop Midwest regional recommendations. There were also five information items to report: committee will provide state task force or primary state agency contact information to DJ Case & Associates to help facility develop of national communication strategy and develop public education materials on negative impacts to native flora and fauna; committee desires higher level of communication on hunting industry marketing of wild pigs and opportunities for sport hunting; committee would like to explore and overcome ways to lift restrictions for member attendance; change name of feral swine to “wild pigs” suggested by International Wild Pig Conference organizers; and have MAFWA consider changing the committee name as well. *Ollie* – That is up to the president. *Lou Cornicelli* - Steve Backs is committee chair. The next meeting at Midwest Fish and Wildlife Conference in Grand Rapids, Michigan in January 2016. *Ollie* – This new committee was formed by Jon Gassett when he was president.

Ollie – Need to change order, the Wildlife and Fish Health Committee will be next as Michelle is riding with Lou and he wants to leave after this.

Wildlife and Fish Health (Exhibit 20) – *Ollie* - Two action items, two resolutions referred to the Resolution Committee. *Michelle Carstensen, MN DNR* – We did a better job at getting Canadian people involved. Timely, first topic was high path avian influenza, good overview was given of what they knew at that time and much has happened since then. Discussed translocation of elk and big horn sheep between states and concerns with diseases. Next we discussed concern on the use of pesticides on seeds and plants and the use of neonicotinoids, which generated one of action items. Presentation was from Dr. Lisa Williams, USFWS, and the banning of use by 2016 on their lands, the basis of our resolution. Discussed CWD and continue to learn with new research and talked about state issues and South Dakota Wind Cave and Custer State Park issue. The National Wildlife Health Center has developed a web-based disease outbreak identification system, called Wildlife Health Information Sharing Partnership-event reporting system (WHISPer) is a partner-driven, web-based repository for sharing basic information about historic and ongoing wildlife mortality and morbidity events involving five or more wild animals and our plans to share that information. One action item: with reports of HPAI share info with other states, how are we communicating on message and work on the disease. Another director

item that did not make it into the report, was the risk and movement of wildlife and associated health risks. The resolution is for discontinuing use of neonicotinoids on state managed land (report by Dr. Lisa Williams). Have a chance to do something about this, follow suit like feds are doing and asking for support to discontinue use of these pesticides. *Bill Moritz, MI* – Broadcast spray better or worse? *Ollie* – Spray? *Bill Moritz, MI* – Through contract sprayers, concern of availability of not-treated seed. *Dale Garner, IA* – Did talk about that, difficult for soybeans, easier for corn; does come with problems, depending on what is going on and following USFWS, are opportunities, but need to plan ahead. *Keith Sexson, KS* – Did public lands committee look at this and would they be supportive? *Bob Welsh, MN DNR* – Public lands did look at it, and don't have action item at this time, same discussions and concerns we had; availability of seed and alternative methods and contractors; and other alternatives potentially being worse. States are keeping an eye on it, but concern of painting ourselves in the corner. *Bob Ziehm, MO* – Implementing studies in wetlands and row crop settings. Plan is to get out of business of using those, but Missouri is very big in Ag. Bring partners into this and starting discussions with major Ag. producers. In looking at resolution, support where group wants to go, but suspect flash in the pan; bring more folks with us by doing it our way, do it on land we hold, we are largest farmer in Missouri with 72,000 acres in production acres. *Bill Moritz, MI* – A lot of these Ag. practices come with having buffers available, so using public land as buffers for private land may have some merit. *Ollie* – We will deal with resolution tomorrow. One other action item: Intentional movement of wildlife and associated health risks. *Ed Boggess, MN DNR* – Saw this during the break, don't think we need formal action. If someone wants to we would consider it, helpful to know where others stand on this issue, but this is good advice. Consider it info for directors.

Furbearers (Exhibit 21) - *John Erb, MN DNR* – No name changes to propose, held in Indiana this year, enjoyable meeting, 27 years since last in Indiana; held at Brown County State Park. No action items, but several information items. Appreciate your support of this group. Extend appreciation for sending biologists to attend Best Management Practices meeting. On study of large carnivores occupancy in the Midwest, address issues state-by-state and potential re-colonization in areas, distribution and abundance, encouraged broad view. Working on petition for plains gray fox and plains spotted skunk, going under status review, want to get better information on whether these are subspecies; collecting genetic data and important to know if proposal is warranted. If we feel it is not, we need to make the case that we don't think it is; will affect management of other species. Working with University of Washington to come up with more user-friendly software tools; also Illinois funded some work to develop some computer software for existing information to estimate population size. Did receive grant this year to do owner trap survey, helps with Best Management Practices and the last survey was 10 years ago. Contractor doing the survey will be able to produce state-specific reports. Working on collaboration on outreach for multistate conservation grants. First school to go into education on furbearer management. Also, 4-6 communication outreach workshops to work with I&E and biologists to talk about trapping that remains controversial. *Ollie* – AFWA staff member, Bryant White works on Best Management Practices, in research office in Columbia, MO. *Kelly Hepler, SD* – Info item #1, last couple lines, suggest if you don't have mountain lions you would re-colonize states, be careful what you ask for. *John Erb* – Aware of that.

Hunter & Angler Recruitment & Retention (*Exhibit 22*) – *Keith Warnke, WI DNR* – Thanks to directors for long support of our attendance. Held meeting February 11 in Indiana, had two items that filled up agenda. On R3 input, concluded that any national plan must be implementable, measurable and adaptable with established links from desired outcomes to strategies to action items to measures and feedback loops; provide a documented path for agencies, industry, and NGOs to follow and evaluate progress towards the overall goal of the plan. Finding survey results show that a significant amount of R3 money is spent on marketing and communication rather than hunter education and seems to focus spending the money on hunters' only; not shooting sports, yet shooting sports is seeing the largest increase in participation. Also, R3 plan going forward and recent jumps in PR funds seem to be in large part from shooter participants. Need to focus more on the 'retention and re-activation' especially in the 25-40 year old males category. Noted lack of understanding of who our (state agencies) audience is and serving our customers, potentially lack of cultural awareness of hunting and shooting to nontraditional demographics. Second item was discussion of adult hunter recruitment programs going on and the multistate grant. It will be important to have data and stats available about your state license sales, population, money generated, etc. Identify strategies, threats etc. Draft is available on council website. One information item on R3 plan, start considering allocation of resources.

Law Enforcement (Association of Midwest Fish and Game Law Enforcement Officers (AMFGLEO)) (*Exhibit 23*) – *Ken Soring, MN* – COs don't like change or the way things are. Aware of strategic plan for Wisconsin, 10-year plan for enforcement, embedded in goals and missions of department. Talking about that next day, reach goals that fish and wildlife have for wildlife; be essential. Compliance and support of regulations that are not effective. Training issues, with budgets not keeping up with needs and IT programs, as well as retirement benefits; looking at more efficient training like online and technology training. Leadership critically important, Law Enforcement Association (LE) Chiefs' Academy, 36 students from 27 states and 13 on waiting list. In LE officer safety and societal changes and need to work with local LE and look at active shooting. Couple of states reported stable funding, one had 53 of 55 positions filled, others facing vacancies. Recruiting, screening and training is expensive, have work force that represents population in general. State patrol uses CO prep, looking for attendance for 14-week peace officer training and then they enter our LE academy. Look at that as step in the right direction. Focus on natural resource background and passionate about that. Using federal grants to look at aquatic invasive species. And look at costs not being funded. Solidify role as ambassadors for the department. Teach importance of laws and why public should care and increase that opportunity by outreach or text or tweet along. Take next call, and manage workload and not looking ahead, but as group trying to do that. Trends we are seeing, poachers from other states and areas, targeting fur, turtles, fish scales; working with joint powers to address that. Interagency work with tribal government, seeing more of that and more agreements to enforce their laws. Talked about technology and records management systems; new one in Minnesota; mobile app to see what people are licensed for; more efficient and better to have good records management system. Have 10,000 entries already. Can search live cases, and use to prepare for group meetings. User groups and legislators are looking at that, the future of work; sharing how to build and best share that within the agencies. T&E listing an issue; see trend in challenges and entering private lands; tall fence operations; confiscated or illegally taken animals is a step in that direction. Comfort with harvest regulations. Small interest groups seeking

legislation, communicate more with legislation we are all facing and talking points. Had an 84-year-old can take an antlerless deer, not bad, but the fact that it was heard about. See positive, with tablets and devices we can check and citizens can go to check Minnesota and see things there. Operate for safety, GPS for officers and now know where they are at. *Scott Zody, OH* – Last statement to put out for the group; in today's climate, officer safety and threats, not immune from attentions that brothers-in-arms are seeing. Increase in harassment or threats? *Ken Soring, MN* – No officers lost in line of duty this year, two in 2014. More security at department events and stakeholder group meetings. Training on sovereign extremists who lash out at everybody. *Scott Zody, OH* – We are seeing huge increase of use of ginseng, you experiencing the same? *Ken Soring, MN* – Large cases on that, valuable commodity; also turtle meat, antlers, nongame species; a lot of activity across the states.

Ollie – MAFWA is blessed with strong sponsors; those groups help support events, meals, hospitality room, thanks for support.

Legal (Exhibit 24) – *Chris Tymeson, KS* – Vice Chair for AFWA legal committee, MAFWA Legal Committee and at one time had picked up WAFWA legal committee too. Last year we did not meet due to lack of participation, met year before. Presentations on wildlife criminal law...wolves' amicus discussion, mediation going on so no recommendation; northern-long-eared bat, possible TRO in lawsuit possible from CBD, AFWA will get engaged quickly. Endangered species proposals, list serve that many states belong to, if your state not on there encourage them to join; attorneys engage directors on those issues. Send attorneys, make it mandatory; with agency 16 years now; attorneys take themselves more seriously and say no. Need direction from their supervisors. Next year not sure if we will meet with this meeting or on our own, I have tried both methods. *Kurt Thiede, WI* – Follow up on northern long-eared bat, came together quickly, can get temporary restraining order if needed. *Ollie* – Bylaws require 10-day notice to have full board meeting. Executive committee can meet in lieu of full board if so desired.

Lunch – Sponsored by Kalkomey (handouts on Today's Hunter – Exhibit 25)

MAFWA COMMITTEE REPORTS (continued)

Ollie Torgerson, MAFWA Executive Secretary, Facilitator – Continue

National Conservation Needs (NCN) (Exhibit 26) – *Jim Douglas, Chair, NE* – Also Scott Zody and Ed Boggess are on the committee. On November 18, asked for submissions, received one NCN proposal that was submitted on January 14 for 2016 grant cycle. Only one proposal from Feral Swine Ad Hoc committee to "Improve benefits for fish, wildlife and their habitats through evaluation of efficacious management strategies for feral swine". The only action item is that the committee asks MAFWA to continue diligence with this effort in submitting NCN proposals.

Pheasant (Exhibit 27) – *Ollie* – One of the older Midwest committees and as a result of their work, led national pheasant action plan, executive committee decided to move forward with employing a National Pheasant Coordinator; announcement out this week or next with person hired by the fall. Did not meet as study group, but met as a National Pheasant Technical

Committee. They do have some director action items, they have asked to disband this study group to join national group. **Kelly Hepler, SD moved, Jim Douglas, NE second.** *Jim Douglas, NE* – Concur that new technical group will replace functions of study group. **Approved.** *Ollie* – Another action item is to approve bylaws of national group, don't feel that is prerogative of this body; National Management Board should approve those. MAFWA is collecting money to fund the coordinator, Sharon Schafer is invoicing the states for that and it will be MAFWA who will be making decisions on hiring this person. *Scott Zody, OH* – Membership goes beyond the Midwest? *Jim Douglas, NE* – Yes it is. *Ollie* – 23 states all together with a financial commitment from most of them.

Private Lands (Exhibit 28) – *Jodie Provost, MN DNR* – Thanks for support, met in early May in Benson, Minnesota all states were there except two and no Canadian partners were present, want to revitalize that connection. Three days of meetings and good plenary on Midwest conservation plan and good work being done implementing them. Integrating work to Minnesota prairie conservation plan. Talked a lot about the farm bill and CRP, etc. Brainstormed looking ahead to farm bill; PR funds and creative ways using that. Two action items: pertaining to CRP, write letter to USDA Secretary Tom Vilsack for sign-up, but changed to thank you letter instead. **Bob Ziehmer, MO moved; Hepler, SD second.** *Kelly Hepler, SD* – This is positive reinforcement; have AFWA send one as well. *Ed Boggess, MN DNR* – Add to this one or send two letters? **Approved.** *Jodie Provost* – Other item is resolution for 30th anniversary. *Ollie* – That will be referred to resolution committee and acted on tomorrow. Also sent to Tom Vilsack if approved. Two cc's on letter, need addresses for those. Will add introductory paragraph that we add to all of the letters we send out, perfect and pass on to Ed for signature. *Jodie Provost* – Cover crop action item, tremendous opportunity to improve soil, water and habitat and a benefit to wildlife. We know about aquatic invasive species, but not terrestrial, support research for that. Support research for cover crops. *Ed Boggess, MN DNR* – Looks like an information item on this, asking us to support within our states, no action from this Association. Ask you to continue to evaluate this issue and identify specific projects then we would vote on. *Bill Moritz, MI* – Any directors using cover crops on public lands. (response was not sure...)? *Ed Boggess, MN DNR* – Rapidly accelerating issue and chance for invasive species; also looking at soil, water and habitat issues.

Public Lands (Exhibit 28) – *Bob Welch, MN DNR* – Thank directors for continued support. Met in conjunction with private land group and give credit to Jodie, friendly rivalry between two groups, but they finished first this year, good job Jodie. Opportunity to discuss issues affecting public lands. During field tour, set foot on Chippewa prairie in southeast Minnesota, contiguous native prairie that you can walk for 17 miles, unique in Minnesota. No one did, but could have. New addition, welcome Paul Lander from USFWS Lands Team. No action items however several items to discuss. Landscape level planning and planning processes beyond unit plans, fall short of statewide action plans. Iowa and Indiana cluster public land units and surround private lands and Missouri are in geographic areas and assembling teams around those areas. Farming practices, touched on neonicotinoids issue, but increasing scrutiny of farming practices with increasing concerns over pollinators; continue to pay attention to Round-up ready crops and cover crops. Minnesota in formal review process to look at farming practices on state lands. Much is perception, nonuse of GMOs when possible, but important tool when restoring prairie. Northern states aware of shorter growing seasons and seed availability and

utilizing special seed sources and increasing demand for those products; market will respond. Prescribed fire standards, perpetual topic for this group; management on federal lands and federal land requiring NWCG standards, varies from state to state and what we are hearing is BOR is most aggressive in requiring federal standards. Michigan had adopted NWCG standards, but the rest have local standards, hard to get done on federal lands. Northern long-eared bat threatened listing and Minnesota is in the process of working through federal grants and ramification of listing to the grants, due to start tomorrow; waiting for biological opinion, optimistic and hope to be able to move along, don't expect determination until August 1 and will lose one month of reimbursement. Iowa acoustic monitoring increasing. Shooting ranges on public lands, from federal aid standpoint, lot of discussion; some staffed some not, message was states that have them on wildlife areas, avoid if you possibly can. *Bob Ziehmer, MO* – With 75 shooting ranges across landscape, educate staff on where the funding comes from, whether hunter or not investing in PR funds. Experience in Missouri to welcome opportunity to interact with committee; have dialog and encourage states to look for those opportunities. Managing wildlife is important, active shooting too; like wildlife watching, but engage in conservation through shooting sports even though they don't hunt. *Bill Moritz, MI* – On GMOs potential on forestry, had several tree diseases, looking at genetically modifying trees and whether we should look at that. *Bob Welsh* – Not discussed that specifically, addressed in forest certification standards they are not allowed; excise crop lands from them.

Ollie – Ed talked about comment letter on 4(d) interim rule on Northern long-eared bats (*comment letter - Exhibit 29*). *Ed Boggess, MN DNR* – Asked Ron Regan to read letter on supporting CRP and whether letter should come from AFWA or both. Announce to full board and audience, signing on to comment letter on 4d rule, letter closes today. Drafted by northeastern foresters group, signed on by southeastern foresters, decided on Sunday to sign onto that letter; dealing with things like clarifying definition of roost tree and maternity roost tree. Southeast Association also signing on and will be sent out today. Ron, voted to sign letter thanking for signup of CRP, Kelly asked if this should be broader, seeking your council and advice. *Ron Regan, AFWA* – Send your own letter and we will look at sending one ourselves in September.

Wildlife Action Plan (*Exhibit 30*) – *Faith Balch, MN DNR* – Met twice last year; at workshop in St. Louis, Missouri and at call-in meeting in May. Role in moving forward with action plans, conversations on conservation at regional level. Deeply involved in most states and takes significant staff and hours. Learned a lot, good experience and better understanding of action plans and energy in work group members. Value and limitation of plans. Meet more often, by phone or web-x. Set up co-chairs and rotate those positions, One always represents state and then previous state will be second chair. Relatively new at working through frameworks, helpful to have Amy involved, would be helpful to have co-chairs. Allocation, appropriation of SWG dollars to the states, not up to 2010 levels, going to SWG Cs, robbing from Peter to pay Paul.

Ollie – One other committee, Carolyn on CITES, she spoke yesterday. Doug Nygren sent report on Reservoir Fisheries Habitat Partnership (*Exhibit 31*). Have director/liaison assigned to every committee, someone they can go to for guidance. These committees are who we are. *Ed Boggess, MN DNR* – Aware of what's going on in our own states, but harder to track regional trends; great way for staff to engage. Important part of Association.

Ed Boggess, MN DNR – Introduced Brian Hyder to talk on public shooting ranges.

Brian Hyder, National Rifle Association – Flyer is important (*Exhibit 32*), heard about ranges a few minutes ago. NRA is hosting second national public range conference (first one on Arizona); well received and overwhelmingly supported. It has been 15 years since anything like that was done in this country. It will be held at NRA headquarters in Fairfax, Virginia, April 11-15, 2016. Not too early to call to reserve a place at the conference; \$100 registration fee, but not taking money until January. As Keith mentioned earlier R3 work being done nationally, lack of access is problem and lack of shooting facilities too. Who is going to step up and provide that if we don't? Let's not run away from that responsibility, but the longer we wait the more difficult it will be, population is growing and harder to find places to shoot. Public range fund has \$400,000 available, half for rest of the year. 60 projects we have helped, with \$1.5 million commitment. Appreciate your interest and we hold up Missouri as standard all the time with 75 unmanned ranges; don't see problems other states are having. When worked for North Carolina shooting ranges always took back burner, provide public access and shooting access for hunters. I am RTTA myself and I can help you myself. Visited a state that had only one range, told them to tear it down because it was inadequate. "Before we were hunters we were shooters". Teach people, agencies doing a great job, thank you states and USFWS, they mind the store and are very supportive. *Ed Boggess, MN DNR* – Appreciate sponsorship of this conference.

Refreshment Break – Sponsored by The Nature Conservancy

FEDERAL UPDATES

U.S. Fish and Wildlife Service

Jim Kurth, Deputy Director for Operations (unable to come) Tom Melius, Midwest Region Director – On behalf of Dan Ashe and Jim Kurth, who is out west with the Secretary and talking about a bird out there. National and regional topics, strive to work arm in arm and have no daylight between the Service and the states, thank you for award given to us. On national level, conserving monarchs is large project for us, strategize and work together to get 225 million butterflies by 2020. Duck stamps is long time conservation tool, price increase from \$15 to \$20, first day of sale today or tomorrow and will bring in more funding. LCC success, initiative in 2009; focus on landscape level management, different because we don't have same constituency, not as visible, but still important. Point out three states that have joined with Charlie Wooley any myself (North Dakota, Iowa and Illinois); urban conservation, disconnects – nature and urban areas, meet public where they are and speak to them how they understand it, to be relevant. Connect public to conservation in tangible way, be more diverse, keep relevant and keep engaged. Thank Bob Ziehmer for joining Director Ashe and myself in Kansas City with 300 kids fishing and planting milkweed. PR/DJ \$1.1 billion; \$314 million for public activities across your states. Two short ESA related issues: Eastern Massasauga rattlesnake, petition 1½ years ago, addressed by listing at threatened in your states. Northern long-eared bat, directly involved many of you and others outside the range. Threatened listing with 4(d) rule, thank MAFWA for organizing workshop, great partnership in Midwest region. Implementation, five regions and 40 plus offices, challenges continues. Comment period closing soon, have staff reviewing and will coordinate a conference call with all the states, priorities of new information and options or activities for final, before we send to Washington office; stay tuned. White-nosed syndrome still

largest threat, \$1 million to fund grants for research on that. Committed on understanding and finding solution to help the bat, appreciate assistance from states. Great Lakes Initiative, saw on Lake Superior, presidential initiative \$276 million, many you are involved in. Asian carp hasn't come up much during this meeting; be on top of preventing spread into the Great Lakes, increase in base funding to monitor and respond to spread in Mississippi basin and in Ohio River, \$800,000 to help with those carp activities. Glad many of staff here for these three days to respond and listen to you, extends partnership to work cooperatively with you and your staff.

U.S. Forest Service

Kathleen Atkinson, Regional Forester from Milwaukee – Appreciate being invited to this meeting. Region 9 is the eastern region, encompasses Minnesota to Maine to Missouri to Delaware; two partners in crime in that region, Michael Rains and Tony Ferguson. Fire funding, lot of info on news, comes out of discretionary budget, more extreme, costing more, etc. A \$93 million fire (just outside of San Francisco in Yosemite). It is 43% of budget now (was 14%); all other slices have gotten smaller because of that and impacted capacity, trying to fix it, no solution yet. Continual erosion of work on the ground. Fire funding, when we run out in a bad year, then we go to other accounts and borrow money from those accounts, fires are mostly out west, not in Midwest or east; frustrating for employees. Another thing looking at nationally and here, how to work more across landscapes, look at all of state lands surrounding state forests; how do we work better together, manage fires across levels. Work locally. Vision in recreation arena, trails and state provides recreation facilities and ask what states are good at and we will provide something that you won't have to; work across landscapes together; good neighbor authority. On 2014 Farm Bill, piloted in Colorado and Utah and how to make this happen; allows state to retain receipts from timber harvest; working with Minnesota and Wisconsin to increase work on the landscape, better timber harvest and wildlife habitat; questions about it still, but working thorough as we go, but great potential. Talking about turn over and recruiting people into positions, I am in the middle, 15 forest supervisors and now hiring seventh new one; cascades down into organization; some areas have half of staff eligible for retirement in a few years; so we will all be recruiting more people, more women and minorities to reflect demographics as a whole. An urban focus, on how do we connect to more urban public; have program and person in Detroit, Boston, Twin Cities and Milwaukee, need to get connected and inspire young people to get involved in nature, not necessarily the Forest Service; but leave value. Leak Hena Au is regional wildlife biologist for this area, stole her from USFWS. Brenda Halter also is back in the room.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service – Wildlife Services

Ed Boggess, MN DNR - Charlie Brown is also here, he is Eastern Regional Director.

Jason Suckow, Western Regional Director – Thanks for opportunity, Gary Nohrenberg is also here from Minnesota office. Look for ability to collaborate with partners. Succession planning, I am new to west, am in Fort Collins, Colorado office. Western region covers Alaska, Washington to North Dakota and California to Louisiana, and Charlie has the rest; some states overlap in the Midwest so that is why we are both here. Wisconsin has new state director, Dan Herchert, from WI DNR; Michigan has Tony Dufney, from Florida, but his home is Michigan; Lee Humberg selected for Indiana and he is coming from Michigan Forest Service. As Kathleen talked about, a number of additional changes coming. Another area: avian influenza (AI) and

wildlife service's involvement; emergency response aspect, veterinary service is lead in response to ag. side and us on wildlife side of that. Ed and Dr. Fischer hit on this; on AI response, 52 employees called up to assist with depopulation on poultry response, deployed to Minnesota and Iowa. Minnesota is hot spot, nationally 75 wild bird detections so far; latest was June 6 from Canada geese in Michigan. Several different premises it is scattered across; 231 premises concerned, 210 commercial, 108 in Minnesota, Iowa has 75, South Dakota 10 and 21 are backyard flocks. 7.5 million turkeys depopulated, 42 million and 2% still pending depopulation. Connection to this and impacts to poultry industry, from mid June, losses represent 7.46% of average industry of turkey, 10% of layer hens and 6.3% of pullets. Because of 2006 and 2007 AI, a lot of states participated in collecting AI sampling with the 75 that came back all across the nation; made no direct line of connection between wild birds and poultry industry. Starting July 1 putting together cooperative agreement to try to get at that component, if priority areas or states. Another big issue is feral swine, update in February, not discussed, but program is effective, task force or workgroup in each state on feral swine objective. To eliminate all together in low population states and detection system; conduct research and new tools to eliminate damage. Most states have goal of total elimination. In addition, just in detection phase in some states here. Know ND continues to work with unique situation of pigs walking across Canadian border, working with them on collaborative issue. Wisconsin killed last feral swine this fall; not official yet, wait and see before we celebrate. Result of illegal relocation effort, ongoing for monitoring. Nebraska aware of pig that showed up last week and they quickly took care of it. Kansas continues to work with Oklahoma, they just keep on giving, continues to be a challenge. Illinois has recently, first started year before, new tool using aerial control and made huge difference as has Kentucky. East has been gearing up in Kentucky and Tennessee with aircraft they have available. Other states have used this useful tool, especially in winter months. Common theme; communication and outreach is key to all involved; applaud the states trying to change their laws on relocation and fencing requirements as it relates to wild pigs. Biggest problem is private land issue, we will not work on any property unless written authorization; and Wisconsin where it originated, how do we deal with illegal releases that continue to happen. Be aggressive and collaborate, put out fires before they go too far.

U.S. Geological Survey

Kurt Newman, Great Lakes Science Center – (Exhibit 33) – Work in Great Lakes and I love what I do; hunt in the fall; and it has been nice to listen to issues here today. Thank Mike Hansen and Mark Vinson, co-authors on my presentation. Describe us as an objective fact finding organization. Priorities since Reagan administration, provide science to state fisheries managers and tribes; a little different than rest of USGS. Deepwater research, on large floating platforms or laboratories and three new across the Great Lakes basin. Most modern vessel fleet across all of USGS and represents 50% of vessels USGS has. We have five vessels, based at ports in Minnesota, Michigan, Ohio and New York. Use lake trout as central character, success story but stay diligent; understand what is happening with ecosystems and societal demands and differences in opinions and native species versus introduced species. Story of hope on lake trout, but if it happens here it can happen anywhere. We know lake trout restoration is finest example of species restoration. Lake trout is long-lived species which makes it susceptible to being overfished starting in late 1800s to early 1900s; fishing mortality led to slow decline over 50 years and sea lampreys showed up in 1950s and trout crashed in period of 5-10 years. Began work with express purpose of sea lamprey control, beginning of new era. Jump up 36 years of

research, courageous decisions to set annual goals, very limited toolbox to work with. Brought together common agenda around harvest, managed within most areas; sea lamprey mortality reduced to target levels; wild fish stocking more than 90% and managers made decision to stop stocking in 1996 and relied on natural reproduction ever since. Since mid-2000s sat around historical levels, but other issues showing up, once more than 50% fat lipid content, now far less, USGS is researching that. What is going on with this population and will we be able to sustain population. One of issues on horizon is managing fisheries, sea lamprey and conducting ecosystem-based research to understand lake dynamics; and research native coregonids (lake whitefish, cisco-lake herring, bloater, kiyi, blackfin cisco, shortjaw cisco, pygmy whitefish, and round whitefish). Today, historical harvest of Cisco (lake herring) well below what it was at its peak; can get in trouble if we are not aware of its problems. World's largest population of trout, and Cisco prevent some species from showing up. Lab did cross survey on entire lake and looked at larval reproduction, about 14 billion fish, is that the right number or do we need more. Applicable to all of the Great Lakes, issue on the forefront. Another issue is that the Great Lakes is 20% of fresh water in the world, it is global fishery and more people want to come here, and farmed fish production is growing; 50% of global fish food production is marine fisheries and 50% from inland lakes. More and more evident in the news. Fish farmers were interviewed for a story, fish producers that want to come here for pen fisheries on Great Lakes; keep that in mind as caretakers of the resource. Recommitment of our willingness to provide science. Kiyi is here (*Exhibit 34*), 1½ hour cruise around the harbor, oldest in our fleet, 14 years old. *Ed Boggess, MN DNR* – In the program there was a misprint, Kiyi is cosponsored by USGS Great Lakes Science Center and Bob Lampe will be on board.

Robin O'Malley, Climate Science Centers – Thank you for the time. Manage eight climate science centers, one in Alaska, one in Hawaii and rest in lower 48, the Midwest is split in two different areas. Joint venture between federal USGS and consortium of universities and we have the ability to reach into USGS and coop units and access the depth of expertise from universities. Not building new staff centers, we are a hub and move to best unit we can find to answer questions from management. In business in 2010, 2011 and 2012; \$100 million in research so far; focusing on actionable science, usable for folks who have to make decisions, on climate change and a little on cultural resources. Range of studies we are doing: work on moose with far northeast states, climate change, population and temperature data you are collecting will be useful. What happens with winter severity, with dabbling ducks and deer, may get ice storms and make connects with species I mentioned. Manage floodplains, that will likely change, get in front of that. Looking at sage grouse and other species that will likely follow. Presentation on trout and trout streams and transitions, working on bass and walleye transitions and where tipping points are going to be. Understand what vegetation will do in some areas, working in Wind Cave National Park on range of species. Look at direction of change, challenges and management strategies that will be most useful to engage those challenges. Salazar and Jewell to advise climate sciences program and how to manage our business and talk to partners in an effective way; four state representatives, Jack Sullivan and Karl Martin have moved on Olivia LeDee and Pat Lederle have moved into those positions. Two main messages from advisory committee, range of folks represented; our part of the business, different than USGS, notion of actionable science, need to understand what the decision is, involved with people doing climate modeling, and connected to decision bases. Work more closely with states, feds, NGOs and tribal partners, but especially states. I will be at other MAFWA meetings and will be listening as well

as some other personnel. Thank you for work done on priorities climate change identified; group of states decides what is important to them, and a lot easier for us to make decisions, hope to come back at future meetings to let you know what we have done. Asked for more funding to work with states. Will be a WAFWA meeting so will encourage them to do similar strategy. I gave you a handout on Climate Registry for the Assessment of Vulnerability (CRAVe) (*Exhibit 35*), a resource for identifying and locating climate change vulnerability assessments and information, built by USGS National Climate Change and Wildlife Science Center with assistance from federal and non-federal partners.

Emerging Trend and Urgent Need – Recruiting Adult Hunters

Keith Warnke, WI DNR – Jay and I are here to say we are team players, but heading for a losing streak (*Exhibit 36*).

Jay Johnson, MN DNR Outreach – Recruitment and Retention (R&R) Director – Thank you for the chance to present. Instrumental in starting R&R committee, was in Minnesota and proud to help start that. Adult hunter recruitment major topics at recent R&R subcommittee meeting this past year. Promote thought on mentoring adults rather than youth. Trend line on certified license holders, we want to point out implications. What these means in terms of funding and staffing; loss of members and standing on NGO level. Presentation, Dr. David Gynnn from Clemson at a conference, herds without hunters; when we lose control what will real costs be if this trend continues. Targeting adults might be more effective way to mitigate this trend. Blockbuster/Netflix comparison to Kodak to first digital camera; two of countless stories of what happens when staying with status quo and missed opportunities. Have a chance to right history and avoid iceberg (like Titanic), chart new course, will take significant twist in the plot. If we don't change and expect that result is going to change; try to grasp opportunity with young adult hunters.

Keith Warnke, WI DNR – Bad news baby boomers graph, half of population number of millennial hunting; a lot of potential population out there, low capture rate, only 13% in Wisconsin, when x-ers were same age 25% participated. Recent student, Courtney is 25, taught her to turkey hunt, asked to deer hunt, then wanted to duck and squirrel hunt as well; conversation turned to Ronald Reagan, President when I graduated from High School, but President when she was born; most diverse generation, fully networked and connected. Quality of life is important, time off important to them, two-thirds to three-quarters like to do stuff outside; hunters waiting for something to happen. Dip toe into this adult water, would like to dive in head first, by starting with two; train them to hunt, get them interested. They are the largest generation and diverse. They are low hanging fruit and have authority to make decisions, have keys to the car, have money, are an economically booming generation; they will do it if we train them and they want to hunt for food. Have identity they are already networked into. Research tells us best trainers are parents and these guys will be parents. Why? food, three books out on challenges to learning how to hunt, think if we provided resources; also websites available that these hunters have set up. Provide skills and a little time to take them out hunting.

Jay Johnson, MN DNR – What do adults need, learn to hunt programs conducted; other states similar work; primarily adults need a few things: classroom time, place them with a mentor to help after the hunt. Online tutorials and access to where to find information. Mentoring is key factor, in sense of forming hunting buddy relationship with the group; hinge pin to make this work. Demographic changes and hunting participation. Start changing culture some; from one idea that is youth and short-term program oriented, to longer adult relation building programs.

Require goals, learning objections and evaluations of anything we are doing now to plan programs to prove goals are being met. Align with R3 plan that is coming out in November and at state and NGO level and get citizens to support it. Try to put together base of real mentors who are willing to give their time, we have adults who really want to learn to hunt; any help we can get much appreciated. Support and help in process in turning out new course, dedicate more time and energy and staff to adult programs. Trying to carve off little piece of workforce and budgets. Easy for us to evaluate this and be able to prove sound work and worth your time.

Depart for Field Trips 4:00 pm

Shooting Range Opportunity, The Midwest Shooting School, Wrenshall - *Jointly sponsored by Bass Pro Shops and National Archery in the Schools*

Research Vessel Kiyi - *Jointly sponsored by U.S. Geological Survey and Great Lakes Fisheries Commission*

Dinner on your Own

Hospitality Room – Sponsored by National Shooting Sports Foundation

