

**Midwest Deer/Turkey Group Meeting**  
**Eagle Bluff Environmental Learning Center, Lanesboro, MN**  
**August 21-24, 2005**

Minnesota has recently hired a staff person devoted to hunter retention and recruitment. He advocated that hunters are our customers and natural resources agencies need to use a business model to manage them. Minnesota has used TV adds in an effort to influence people's priorities. He argued that agencies need to change our tradition of passive marketing. Minnesota created a youth deer hunting license, \$14 versus \$26 for adults. The fee cut had a minor effect on gun license sales but did increase bow sales. License sales to girls increased.

Minnesota has received considerable federal funds under CREP. During CREP 1 they acquired ~4,700 conservation easements on 180,000 acres, mostly in the Minnesota River valley. Under CREP2 they have a goal of 120,000 acres in 4,500 easements. They are planning to match \$200 million federal funds with \$50 million in state funds. They did receive \$23 million in bonding during the last legislative session.

Research is being conducted on the population dynamics of moose in northeastern Minnesota. The population is not increasing despite a series of mild winters. Harvest is primarily bulls. 114 moose captured and radio-collared. Estimates of annual survival average 73% for bulls and 80% for cows. Causes of mortality include 5 accidents, 2 wolves, 8 hunter harvest (all bulls), 1 poached, and 19 unknown. Most "unknown" are prime age individuals who have "tipped over". All tests have come back negative. 18 of 109 animals had antibodies to P. tenuis, only 4 of these died, only 1 of 4 showed evidence of brain infection. About 90% of cows pregnant mostly produce single calves. Annual calf survival estimated at 38%. They are building a sightability model for their helicopter aerial survey, sightability is ~50%.

In a study of fawn survival in northcentral Minnesota 41 fawns were captured and 31 birth sites identified. Birth sites were in a variety of cover types. There was no relationship between concealment cover at birth site and initial survival. Survival was 90% at 1 week and 60% at 12 weeks. Causes of mortality were black bears 29%, bobcat 26%, wolves 9%, red fox 3%, unknown predation 24%. Does and fawns were usually within 200 meters of each other but distance varied widely. Siblings were usually 100-200 meters apart.

Glen DelGiudice summarized 16 years of research into effects of reduced conifer cover and winter severity on deer survival. Long-term research is needed to capture environmental variability. About 400 females were radio-collared. Some does were 15-18 years old. Annual mortality rates averaged 25-30%, primary cause of death were wolves (24%) and hunters (21%). Hunter harvest varied by number of permits issued. Wolf predation varied as a function of snow depth. Hunter harvest focused on 2-5 year old does while wolf predation concentrated on older does.

Missouri is experimenting with antler point restrictions as a method to shift harvest pressure from bucks to does in 29 counties in northwest and northcentral. Bucks with 4 points per side are legal. Buck harvest was reduced 29% and antlerless harvest increased 13% in treatment counties compared to the year prior to the change in regulation. In adjacent control counties without antler point restrictions, antlered and antlerless harvest increased 9 and 10%, respectively. The number of yearling bucks in the harvest decreased 66% in the treatment counties but increased 11% in the control counties. After the first year, landowners and hunters were generally satisfied with point restrictions.

Michigan has developed a process by which organizations may propose antler restrictions. The sponsoring organization must submit a proposal along with a \$2000 donation that is used by MDNR to survey hunters and landowners. MDNR requires a support threshold of 66%.

Minnesota is in the process of updating deer population goals that were established in the 1980s and early 90s. They are also recalibrating their accounting population models using helicopter quadrat surveys and distance sampling with spotlight counts. They are considering alternative management strategies to increase harvest of antlerless deer including an October antlerless only season, antler point restrictions, and earn-a-buck. They will be conducting social surveys to assess hunter and landowner preferences.

**State Reports** focused on methods used to estimate harvest, population size, goal setting and expression, ways to regulate antlerless harvest, and whether there are public land harvest restrictions.

**Illinois:** Shifting from mandatory checkstations to telecheck/internet. Will continue checkstations in areas where they are sampling for CWD. Estimates population with accounting models calibrated to population reconstruction, Lang and Wood, hunter success and deer-vehicle accidents. Due to personnel cutbacks and CWD workload have not updated models the past few years. Population goals are set at early 1990s population level. Population was relatively stable in the mid-late 1990s. Populations began to grow ~4 years ago. Expecting another large harvest in 2005. Have many special regulations for individual properties. Illinois capped non-resident archery licenses at 2000 level. In 2004 increased cap to 15,000 increased fee from \$100/tag to \$225/tag, sold out in 8-10 hours. Legislature increasing cap to \$20,000 and fee to \$425 by 2007 on top of hunting license and habitat stamp (total ~\$500). Clients of outfitters to get 1<sup>st</sup> 7,500 permits. 96 deer have tested positive for CWD in 4 counties.

**Indiana:** Harvested is determined with mandatory checkstations. Operate biological checkstations on opening weekend. Does no population modeling. Uses surveys of farm operators and hunters to assess desired population trend. Antlered buck harvest is primary index to population trend. Antlerless harvest regulated with county bag limits. In mid 1990's brought herd down, backed off, lost ground and now at all time record high. Liberalizing bag limits again. Use roadkills as population trend along with crop damage complaints. Public land managers can exclude their properties from use of bonus permits for fish and wildlife areas and state forests.

**Iowa:** Uses a population simulation model that is calibrated to spring spotlight surveys, roadkill index, and aerial surveys. Goal is expressed in terms of desired harvest. Attempting to reduce herd 25% over 5 years. Considering a 3-day early antlerless season during the week before the December shotgun season, but bow hunters claim this is the best time for bow hunting. Too many deer, too few hunters (only 170,000 hunters). Added \$1 fee/deer license for food pantry donations. Conduct landowner survey every 5 years to assess social carrying capacity. Have exceeded SCC. Uses hunter post card survey to estimate harvest but is considering telecheck. Only state parks restrict hunter access. Have a cap of 6,000 non-resident tags. Getting pressure from insurance industry to address deer-vehicle accidents. Posthunt population ~400,000, trying to reduce to 300,000. 13,000-15,000 deer-vehicle accidents/year.

**Kansas:** Uses post season questionnaire mailed to random sample of hunters to estimate harvest. Ask days hunted, sex and age of deer harvested, satisfaction, land access/lease. About ½ of respondents complete survey on line. Rely on roadkills as index of population. 19 DMUs in state. Adjusts roadkills for vehicle miles traveled. Tracks well with bowhunter observations. Starting up spotlight surveys with distance sampling with 2 routes per DMU. Bonus antlerless permits are not valid on department lands. Goals in strategic plan expressed in terms of roadkills/million miles, percentage of landowners experiencing crop damage, percent of deer hunters harvesting deer. Starting to experiment with a statewide population model.

**Michigan:** Uses hunter surveys to estimate harvest, mail ~50,000 questionnaires, ~65% return rate. Uses SAK to estimate population size, reducing use of pellet group counts. Collects age and sex data from voluntary biological checkstations, ~45,000 deer/year examined. Roadkills serve as population index. Stopped using damage complaints because biologist inspection is no longer needed for landowners to get antlerless permits. Has a population goal for each DMU. In the process of revising goals in the UP. Private land antlerless permits on sale for 175 days, limit of 1 permit/hunter/day. 96% of hunters buy 3 or less permits. Public land permit have a quota and are issued through a limited drawing.

**Minnesota:** Determines harvest with mandatory registration. Moving toward electronic registration with automatic license system. Expect 75% of harvest to be entered with ALS. Costs \$1.08 to register deer with new system. Uses accounting models to estimate population size, in the process of recalibrating with aerial surveys and distance sampling. Population goals are numeric and are being devised. No hunter/harvest limits on public land.

**Missouri:** Switching from mandatory in-person registration to telecheck. During a pilot study, study group participants checked deer at a 24% higher rate than hunters who were not in the study suggesting that non-registration may be higher than was previously thought. Telecheck is expected to increase harvest reporting due to easy and convenience. Contracting with MCI, using a voice recognition system that repeats and checks. Process takes ~2 minutes. Hunters are given a confirmation number that they must write in tag

that is affixed to deer. Will use meat processors and taxidermists as locations to collect biological data. Found that they can get reasonable data on adult bucks and does but fawns were underrepresented. Using roadkills and archery hunter observations as indices of abundance, also field staff reports. Use accounting models to estimate population size and trend. Have conducted research on reproduction and non-harvest mortality. Use landowner and hunter surveys to assess social carrying capacity. Deer-vehicle accidents are the current hot issue.

**Nebraska:** Has mandatory checkstations during all deer seasons. Is considering telecheck for non-gun seasons. Only 3-4 federal refuges control number of hunters. Goals are expressed in terms of desired harvest. Survey landowners every 5 years to assess desires for deer numbers of hunter numbers and amount of deer damage. Demand for transferable permits issued to outfitters is increasing despite general availability of non-resident permits. Experienced some EHD losses of older deer but harvest still increased because weather was good and hunters could access deer. A CWD positive deer was found 200 miles east of previously known affected area, additional sampling in that area found no other positives. Will conduct more extensive testing in the eastern part of the state. Does not attempt to estimate population size or express goals in terms of population size. Goals focus on landowner needs and hunter demands. Feels they are killing as many deer as they can kill.

**North Dakota:** Uses mail questionnaire to estimate harvest. ~150 questionnaires per unit and license type. Flies aerial surveys in permanent monitoring blocks to monitor population trends. Uses roadkills and questionnaires to mule deer hunters who record observations on first 2 days of season as population index. Observations are affected by snow. Goals are expressed in terms of permits not population. Does not collect any biological data. Looking to extending season in December by 2 weeks to increase antlerless harvest.

**Ohio:** Uses mandatory checkstations but does not pay cooperators. Cooperators are starting to complain that they are checking too many deer, concern they may be reaching capacity of system. Considering telecheck. Has county based accounting models and uses roadkills as population index (25,000-30,000 DVA/year). Estimates of mortality rates in model are from other states. Population goals are established for each county. Harvest is regulated by bag limits of 1-3 deer. Uses landowner surveys to establish goals, landowner tolerance for deer has increased and goals may be getting higher than hunters can harvest. Has a bowhunter observation survey with 3,000-4,000 participating bowhunters. Received a Homeland Security grant to purchase a FLIR system for Department helicopter. Will experiment with it for counting deer. Has extensive culling program around Cleveland metro parks. Have discontinued all contraception research. Denied USDA-WS permit for research on NASA Plum Brook facility. Immunocontraception efforts in Cleveland parks discontinued, pregnancy rates of 55% and 75% with different formulations of PZP. Evidence of reduced bone marrow fat in treated deer. Believe populations in many counties are being brought down to goals with harvests of 2 antlerless deer/buck.

**South Dakota:** Estimates harvest with mail survey to random sample of hunters. Includes a tooth envelop to determine age structure of population. Reducing fees and eliminating caps on license sales to increase harvest of antlerless deer. Leftover tags can be purchased over the counter at regional offices and selected vendors. Population assessment has largely been subjective. Considering use of aerial surveys.