34th Midwest Deer and Wild Turkey Study Group Proceedings

August 22-25, 2010
Camp Grafton
Devils Lake, North Dakota

2010 Midwest Deer and Wild Turkey Study Group Proceedings
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34th Midwest Deer and Turkey Study Group
Meeting Proceedings

Due to scheduling issues with speakers, the annual business meeting was presented in two sessions. The first session was Monday, August 23rd at 10AM. During the first meeting a resolution on the baiting and feeding of deer and wild turkeys was presented by Bill Jensen (North Dakota Game and Fish Department). A draft of the resolution was handed out to all participants. After a brief introduction the floor was open for discussion. Most of the comments were in regard to formatting, and length of the resolution. After about 20 minutes of discussion, Lloyd Fox (Kansas Department of Wildlife and Parks), made a motion that the resolution be accepted and that a committee deal with any grammatical or formatting changes that may be needed. Tom Micetich (Illinois Department of Natural Resources) seconded the motioned. There were no additional remarks. The resolution was accepted by a unanimous voice vote. A committee consisting of Paul Brewer (Illinois Department of Natural Resources), Bill Jensen (North Dakota Game and Fish Department), Lloyd Fox (Kansas Department of Wildlife and Parks), Tom Litchfield (Iowa Department of Natural Resources), Keith McCaffery (Wisconsin Department of Natural Resources: Retired), Tom Micetich (Illinois Department of Natural Resources), and Robert Rolley (Wisconsin Department of Natural Resources) was selected to assist with formatting changes to the resolution. On order to complete editorial changes to the resolution, this group met immediately after the speakers finished presentations at 5PM. Jerry Gulke (North Dakota Game and Fish Department) provided technical assistance by projecting the resolution on a wall to assist with editorial changes.

The second business meeting session started Tuesday, August 24th at 1PM and lasted about one hour. Lloyd Fox and Mike Micetich led the discussion on reformatting the baiting and feeding resolution. All were comfortable with the modifications made by the committee.

The next order of business was to select a location for the next Midwest Deer and Turkey Workshop in 2011. Al Stewart (Michigan Department of Natural Resources and Environment [MDNRE]) offered to host the 2011 Deer and Turkey Workgroup meeting. Based on input at our 2010 meeting, the proposed dates for the 2011 meetings were selected to be September 25-28. The location will be the MDNRE conference center near Higgins Lake. More information on the location and facilities can be found at: http://www.michigan.gov/dnr/0,1607,7-153-10365-71716--,00.html. Brent Rudolph (MDNRE) will also be assisting with arrangements for the 2011 meeting. Andy Lindbloom (South Dakota Game, Fish, and Parks) tentatively offered to host the 2012 meeting in South Dakota.

Last Name	First	Organization	Address	City	State	Zip	Phone	Email
Bishop	Todd	Iowa Dept of Natural Resources	Wallace State Office Bldg., 502 E 9th St.	Des Moines	IA	50319	515-281-7127	Todd.Bishop@dnr.iowa.gov
Brewer	Paul	Illinois Dept of Natural Resources	One Natural Resources Way	Springfield	IL	62702-1271	217-7824377	Paul.Brewer@illinois.gov
Fox	Lloyd	Kansas Dept of Wildlife & Parks	PO Box 1525	Emporia	KS	66801-1525	620-342-0658 ext 207	lloyd.fox@ksoutdoor.com
Garner	Dale	Iowa Dept of Natural Resources	Wallace State Office Bldg., 502 E 9th St.	Des Moines	IA	50319	515-281-6156	dale.garner@dnr.iowa.gov
Gosselink	Todd	Iowa Dept of Natural Resources	24570 Hwy 34	Chariton,	IA	50049	641-774-2958	Todd.Gosselink@dnr.iowa.gov
Hams	Kit	Nebraska Game & Parks Commission	2200 N 33rd St.	Lincoln	NE	68503	402-471-5442	Kit.Hams@nebraska.gov
Gulke	Jerry	ND Game & Fish Dept	100 N Bismarck Expressway	Bismarck	ND	58501-5095	701-328-6303	jgulke@nd.gov
Jenks	Jonathan	South Dakota State University	PO Box 2206	Brookings	SD	57007-1696	605-690-4740	jonathan.jenks@sdstate.edu
Jensen	Bill	North Dakota Game and Fish Dept	100 N Bismarck Expressway	Bismarck	ND	58501-5095	701-220-5031	bjensen@nd.gov
Johnson	Roger	North Dakota Game and Fish Dept	7928 45th St NE	Devils Lake	ND	58301	701-662-3617	rejohnso@nd.gov
Kohn	Stan	North Dakota Game and Fish Dept	100 N Bismarck Expressway	Bismarck	ND	58501-5095	701-328-6339	skohn@nd.gov
Lindbloom	Andy	South Dakota Game, Fish, & Parks	20641 SD Hwy 1806	Ft. Pierre	SD	57532	605-223-7709	andy.lindbloom@state.sd.us
Litchfield	Thomas	Iowa Dept of Natural Resources	Chariton Research Station, 24570 US Hwy 34	Chariton	IA	50049	641-774-2958	Tom.Litchfield@dnr.iowa.gov
Lusk	Jeffrey	Nebraska Game & Parks Commission	2200 North 33rd Street	Lincoln	NE	68503	402-471-1756	jeff.lusk@nebraska.gov
McCaffery	Keith	Wisconsin Dept of Natural Resources	107 Sutliff Ave	Rhinelander	WI	54501	715-365-2641	keith.mccaffery@wisconsin.gov
McJunkin	Jared	NWTF	25212 Wapiti Rd	Hermosa	SD	57744	605-255-5979	jmcjunkin@nwtf.net
Micetich	Tom	Illinois Dept of Natural Resources	700 S 10th St	Havana	IL	62644	309-543-3316 ext 231	tom.micetich@illinois.gov
Pitman	Jim	Kansas Dept of Wildlife & Parks	PO Box 1525	Emporia	KS	66801-1525	620-342-0658 ext 211	jim.pitman@ksoutdoors.com
Rolley	Robert	Wisconsin Dept of Natural Resources	2801 Progress Rd	Madison	WI	53716-3339	608-221-6341	robert.rolley@wisconsin.gov
Schaffer	Brian	SD State Graduate Student	PO Box 51	Wing	ND	58494-0051	570-994-7197	brian.schaffer@sdstate.edu
Smith	Jason	ND Game & Fish Dept	3320 E Lakeside Road	Jamestown	ND	58401	701-253-6480	jrsmith@nd.gov
Stewart	Al	Michigan Dept of Natural Resources	PO Box 30444	Lansing	MI	48909-7944	517-373-1263	stewarta1@michigan.gov
Tonkovich	Mike	Ohio Dept of Natural Resources	360 East State St	Athens	OH	45701	740-589-9922	mike.tonkovich@dnr.state.oh.us
Wegan	Mike	Michigan Dept of Natural Resources	Rose Lake Wildlife Research Center, 8562 E Stoll Rd	East Lansing	MI	48823	517-641-4903 ext 258	WeganM@michigan.gov

Meeting Locations

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

34th Midwest Deer & Wild Turkey Study Group Meeting Agenda

Camp Grafton (Devils Lake, ND)
August 22-25, 2010

Sunday, August 22:

Check-In (3PM to 7PM) Where: Billeting Office
5:30PM Food and refreshments

Monday, August 23:

Morning Session;
7:30AM: Breakfast
8:30AM: Welcome by Lt. Col. Jensen, Engineering Officer, Camp Grafton and Terry Steinwand, Director, North Dakota Game and Fish Department (NDGF).
9:00AM: History of Devils Lake, Randy Hiltner, NE District Fisheries Supervisor, NDGF.
9:30AM: Wing-Tuttle White-tailed Deer Study. Bill Jensen, Big Game Biologist, NDGF, Bismarck, ND.
9:45AM: Break
10:00AM: White-tailed Deer Research on the Northern Great Plains. Jon Jenks, South Dakota State University, Brookings, SD.
11:00AM: Investing in Wisconsin's Whitetails. Robert Rolley, Wildlife Population Ecologist, Wisconsin DNR, Madison, WI.

Noon: Lunch

1:00PM: Corridors of Diversity – Riparian Areas and Their Importance to Wildlife on the Northern Great Plains. Jared McJunkin, National Wild Turkey Foundation, Hermosa, SD.
2:00PM: Parasites and Diseases of Deer and Turkeys in the Northern Great Plains. Dan Grove, Wildlife Veterinarian, NDGF, Bismarck, ND.
3:00PM: Break
3:30PM: Resolution on Baiting and Feeding Deer and Turkeys.
5:00PM: Adjourn
5:30PM: Social, Dinner at 6:30PM

Tuesday, August 24:

7:30AM: **Breakfast**

Morning Sessions:

8:30AM: **Discussion: Potential for Cooperative Research Projects. Standardized Methodology, Sampling, and Reporting**
White-tailed Deer State Status Reports
Turkey State Status Reports

9:45AM: **Break**

10:00AM: **Continue: White-tailed Deer State Status Reports**
Turkey State Status Reports

Noon: **Lunch**

1:00PM: **Business Meeting**

1. **Resolution on Baiting and Feeding Deer and Turkeys.**
2. **Next Workshop location**

3:00PM: **Break**
3:30PM: **Continue with Business Meeting**
5:00PM: **Adjourn**
5:30PM: **Social, Dinner at 6:30PM**

Wednesday, August 24:

7:30AM: **Breakfast**
8:00AM **Check Out**

Agency

Deer

Reports

Illinois Deer Report
2010 Midwest Deer Study Group

Automated harvest reporting system for deer and wild turkey continues to improve. The majority of duplicate records found in the deer harvest database now involve muzzleloader hunters who kill deer during the 2nd Firearm Deer weekend in manned deer check counties. ML hunters may use electronic harvest reporting, or bring their animal to a manned deer check station for CWD sampling during that weekend. Some do both, hence the duplication.

We continued to operate manned firearm deer check stations to facilitate CWD surveillance testing in select northern Illinois counties where CWD is a major concern. Eight check stations served nine counties. Our 3-year drop in CWD positive animals has ended with the identification of 37 during our 2009-10 campaign (up from 30 in 2008-09). Hunters harvested 16, while sharpshooters removed an additional 20; with one suspect testing positive. No new areas were revealed.

Recent legislation will require that IDNR make available single either sex permits to resident archers, beginning on 1 Jan 2011. We discontinued that permit in favor of a single antlerless-only permit (for both residents and non-residents) in 2006, as part of our effort to increase female deer harvest. Unlimited resident combination permits (1 ES; 1 AO) and resident/non-resident antlerless only archery permits will remain available OTC.

Changes implemented in 2009-10:

1) Late-winter antlerless deer season was expanded to a 7 day split (31 Dec – 3 Jan; and 15 – 17 Jan), from the previous mid-January, 3-day season. Any unfilled firearm permit from the prior fall could be utilized provided it was issued for an open county. Additionally, late-winter season permits were sold OTC (limit 1 in most counties; unlimited availability in the counties most significantly above goal). All deer were checked electronically. While the late-winter season harvest increased by 42% with the additional days, it made little difference to the overall deer harvest. Hunters may be reacting to the increased opportunity by being more selective during the regular firearm deer season (i.e., “buck hunting”) and then increasing their antlerless take during the late winter season.

2) Archery season was extended statewide through the end of the late-winter season dates, essentially adding 3 more days. Bow hunters followed archery season rules and limits throughout the season, even when concurrent firearms seasons were open (youth, muzzleloader, late winter, or special CWD).

3) All Youth, CWD and Late-Winter Firearm deer season permits were sold OTC; or on-line. Additionally, for the first time, any firearm and muzzleloader deer season permits remaining after our lottery period were made available OTC throughout each of those seasons as well. As a result of OTC availability, an additional 17,906 firearm (15,897 antlerless) and 4,838 muzzleloader permits (4,596 antlerless) were sold.

4) CWD season ran concurrently with the 7-day late-winter antlerless season, in the four core CWD counties, plus Kane County. Any unfilled firearm permit from the prior fall could be utilized provided it was issued for an open county. The 2-buck limit is waived during the CWD season for firearm hunters. There was NO MANNED DEER CHECK during this season this year due to the high cost of collecting samples. Hunters were encouraged to seek out cooperating CWD

sampling stations (primarily meat processors) and/or voluntary head drop-off points in CWD counties. The CWD season harvest increased from 279 to 472.

Changes proposed for 2010-11:

1) There will be resident firearm deer permit fee increases for the first time in about 20 years. The combination archery permit, however, will remain unchanged. Either-sex permits will go to $25 and antlerless only permits to $17.50 from the former $15 each.

2) There were no major changes put forth by Forest Wildlife staff for the upcoming season. However, legislation recently passed which requires IDNR to issue single either-sex archery permits beginning on 1 Jan 2011.

3) Program staff needs to re-evaluate the use of deer-vehicle collision (DVC) rates as an index of deer populations due to legislation that changed the mandatory accident reporting threshold, increasing the amount from $500 to $1500. The Deer Task Force (2008) recommended that DVC rates be used to measure deer management progress.

Illinois Department of Transportation personnel were unprepared for the change which took effect on 1 Jan 2009. There had been no collection of data in prior years which would allow separation of accidents ≥$1500 to allow comparison with new data. During 2009 there was a 28% decline in reported DVCs statewide compared to 2008. IDOT staff initially speculated that the increased reporting threshold would not affect accident reporting rates (since DVCs typically cause significant damage), and that the observed significant reduction in reported DVCs may have resulted from population impacts of CWD. To complicate matters further, there is a 2-tier reporting threshold: insured motorists are subjected to the $1500 threshold; while uninsured motorists are required to report $500 accidents.

ILLINOIS **COUNTY DEER HARVEST BY SEX FOR EACH HUNTING SEASON -- 2009**

rev. 06/02/10

	Youth			Muzzle			L-W/CWD			Firearm			Archery			ALL SEASONS		
County	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**
Adams	36	45	**81**	31	50	**81**	125	438	**563**	1310	1172	**2482**	780	628	**1408**	2282	2333	**4615**
Alexander	4	0	**4**	17	16	**33**	0	0	**0**	370	214	**584**	115	160	**275**	506	390	**896**
Bond	7	16	**23**	14	16	**30**	25	81	**106**	419	424	**843**	223	206	**429**	688	743	**1431**
Boone	4	4	**8**	3	5	**8**	13	34	**47**	87	72	**159**	102	67	**169**	209	182	**391**
Brown	13	21	**34**	28	44	**72**	109	284	**393**	729	750	**1479**	502	387	**889**	1381	1486	**2867**
Bureau	11	14	**25**	41	56	**97**	98	351	**449**	702	584	**1286**	461	431	**892**	1313	1436	**2749**
Calhoun	21	21	**42**	33	60	**93**	75	291	**366**	681	705	**1386**	534	548	**1082**	1344	1625	**2969**
Carroll	12	9	**21**	16	40	**56**	65	169	**234**	536	493	**1029**	308	327	**635**	937	1038	**1975**
Cass	4	13	**17**	18	22	**40**	31	108	**139**	384	347	**731**	316	320	**636**	753	810	**1563**
Champaign	4	7	**11**	19	25	**44**	0	0	**0**	166	122	**288**	207	203	**410**	396	357	**753**
Christian	11	7	**18**	15	12	**27**	25	97	**122**	343	263	**606**	231	267	**498**	625	646	**1271**
Clark	13	16	**29**	22	40	**62**	26	166	**192**	745	583	**1328**	411	401	**812**	1217	1206	**2423**
Clay	12	24	**36**	15	32	**47**	45	166	**211**	734	589	**1323**	287	342	**629**	1093	1153	**2246**
Clinton	12	16	**28**	13	11	**24**	14	63	**77**	445	364	**809**	209	200	**409**	693	654	**1347**
Coles	6	6	**12**	8	8	**16**	17	74	**91**	398	305	**703**	306	329	**635**	735	722	**1457**
Cook	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	139	84	**223**	139	84	**223**
Crawford	9	15	**24**	10	30	**40**	40	149	**189**	658	503	**1161**	429	409	**838**	1146	1106	**2252**
Cumberland	3	10	**13**	14	12	**26**	30	81	**111**	471	420	**891**	197	204	**401**	715	727	**1442**
DeKalb	2	2	**4**	10	7	**17**	29	53	**82**	115	101	**216**	108	117	**225**	264	280	**544**
DeWitt	7	2	**9**	10	19	**29**	0	0	**0**	247	164	**411**	187	389	**576**	451	574	**1025**
Douglas	1	1	**2**	3	9	**12**	0	0	**0**	104	84	**188**	85	79	**164**	193	173	**366**
DuPage	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	41	31	**72**	41	31	**72**
Edgar	12	8	**20**	14	30	**44**	20	86	**106**	457	316	**773**	240	201	**441**	743	641	**1384**
Edwards	0	6	**6**	9	16	**25**	13	68	**81**	322	188	**510**	102	118	**220**	446	396	**842**
Effingham	18	16	**34**	7	16	**23**	23	82	**105**	600	428	**1028**	231	258	**489**	879	800	**1679**
Fayette	29	32	**61**	21	39	**60**	76	255	**331**	1029	883	**1912**	395	417	**812**	1550	1626	**3176**
Ford	2	3	**5**	4	3	**7**	0	0	**0**	81	33	**114**	40	33	**73**	127	72	**199**
Franklin	17	14	**31**	14	35	**49**	0	0	**0**	705	504	**1209**	344	454	**798**	1080	1007	**2087**
Fulton	38	41	**79**	59	65	**124**	162	552	**714**	1396	1219	**2615**	953	863	**1816**	2608	2740	**5348**
Gallatin	8	6	**14**	10	32	**42**	0	0	**0**	402	246	**648**	197	190	**387**	617	474	**1091**
Greene	17	15	**32**	23	34	**57**	58	228	**286**	689	698	**1387**	364	399	**763**	1151	1374	**2525**
Grundy	4	5	**9**	8	15	**23**	28	105	**133**	225	171	**396**	217	216	**433**	482	512	**994**
Hamilton	15	12	**27**	24	30	**54**	27	151	**178**	721	586	**1307**	260	291	**551**	1047	1070	**2117**
Hancock	14	23	**37**	54	55	**109**	114	353	**467**	1019	934	**1953**	428	381	**809**	1629	1746	**3375**
Hardin	14	12	**26**	18	49	**67**	0	0	**0**	605	462	**1067**	149	188	**337**	786	711	**1497**
Henderson	2	2	**4**	12	15	**27**	29	105	**134**	327	274	**601**	143	112	**255**	513	508	**1021**
Henry	7	5	**12**	23	33	**56**	59	135	**194**	402	297	**699**	276	270	**546**	767	740	**1507**
Iroquois	9	11	**20**	21	28	**49**	0	0	**0**	351	304	**655**	257	234	**491**	638	577	**1215**
Jackson	18	15	**33**	40	42	**82**	0	0	**0**	1249	915	**2164**	307	439	**746**	1614	1411	**3025**
Jasper	19	16	**35**	28	34	**62**	0	0	**0**	690	561	**1251**	294	363	**657**	1031	974	**2005**

ILLINOIS **COUNTY DEER HARVEST BY SEX FOR EACH HUNTING SEASON -- 2009**

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	Youth			Muzzle			L-W/CWD			Firearm			Archery			ALL SEASONS		
County	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**
Jefferson	36	45	**81**	46	57	**103**	78	415	**493**	1302	1083	**2385**	669	886	**1555**	2131	2486	**4617**
Jersey	13	13	**26**	19	15	**34**	42	133	**175**	493	445	**938**	287	301	**588**	854	907	**1761**
JoDaviess	23	27	**50**	52	62	**114**	172	472	**644**	1205	1091	**2296**	545	515	**1060**	1997	2167	**4164**
Johnson	13	18	**31**	24	43	**67**	40	182	**222**	1089	685	**1774**	263	349	**612**	1429	1277	**2706**
Kane	1	0	**1**	1	2	**3**	4	25	**29**	34	20	**54**	232	178	**410**	272	225	**497**
Kankakee	2	2	**4**	5	9	**14**	0	0	**0**	129	82	**211**	188	156	**344**	324	249	**573**
Kendall	2	1	**3**	7	7	**14**	0	0	**0**	69	28	**97**	138	135	**273**	216	171	**387**
Knox	16	21	**37**	33	52	**85**	102	308	**410**	795	636	**1431**	510	494	**1004**	1456	1511	**2967**
Lake	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	297	192	**489**	297	195	**492**
LaSalle	12	18	**30**	23	48	**71**	85	338	**423**	629	503	**1132**	597	694	**1291**	1346	1601	**2947**
Lawrence	2	5	**7**	13	15	**28**	19	89	**108**	386	284	**670**	231	206	**437**	651	599	**1250**
Lee	9	9	**18**	19	28	**47**	0	0	**0**	345	330	**675**	239	275	**514**	612	642	**1254**
Livingston	2	6	**8**	11	19	**30**	0	0	**0**	262	221	**483**	172	161	**333**	447	407	**854**
Logan	3	1	**4**	9	10	**19**	25	87	**112**	235	161	**396**	136	130	**266**	408	389	**797**
Macon	5	6	**11**	16	16	**32**	0	0	**0**	200	118	**318**	248	332	**580**	469	472	**941**
Macoupin	25	22	**47**	25	31	**56**	63	209	**272**	940	798	**1738**	480	473	**953**	1533	1533	**3066**
Madison	16	10	**26**	16	17	**33**	24	111	**135**	525	416	**941**	497	541	**1038**	1078	1095	**2173**
Marion	26	42	**68**	25	43	**68**	61	273	**334**	1114	884	**1998**	555	601	**1156**	1781	1843	**3624**
Marshall	12	11	**23**	19	16	**35**	33	114	**147**	409	353	**762**	221	173	**394**	694	667	**1361**
Mason	14	14	**28**	21	13	**34**	22	84	**106**	353	292	**645**	216	201	**417**	626	604	**1230**
Massac	5	6	**11**	7	34	**41**	0	0	**0**	372	293	**665**	142	190	**332**	526	523	**1049**
McDonough	13	9	**22**	21	43	**64**	58	221	**279**	578	532	**1110**	327	283	**610**	997	1088	**2085**
McHenry	2	2	**4**	7	11	**18**	43	79	**122**	199	176	**375**	366	255	**621**	617	523	**1140**
McLean	10	10	**20**	18	31	**49**	47	146	**193**	387	286	**673**	272	313	**585**	734	786	**1520**
Menard	2	6	**8**	10	16	**26**	16	99	**115**	244	205	**449**	172	192	**364**	444	518	**962**
Mercer	5	7	**12**	17	33	**50**	52	130	**182**	476	395	**871**	221	190	**411**	771	755	**1526**
Monroe	8	12	**20**	12	12	**24**	12	82	**94**	602	487	**1089**	141	136	**277**	775	729	**1504**
Montgomery	16	11	**27**	22	15	**37**	28	148	**176**	695	495	**1190**	365	372	**737**	1126	1041	**2167**
Morgan	15	8	**23**	15	24	**39**	38	131	**169**	566	528	**1094**	336	305	**641**	970	996	**1966**
Moultrie	5	12	**17**	9	19	**28**	0	0	**0**	155	140	**295**	149	204	**353**	318	375	**693**
Ogle	14	7	**21**	23	35	**58**	111	225	**336**	578	532	**1110**	456	375	**831**	1182	1174	**2356**
Peoria	23	20	**43**	35	34	**69**	100	333	**433**	779	735	**1514**	612	695	**1307**	1549	1817	**3366**
Perry	19	12	**31**	14	23	**37**	53	232	**285**	779	567	**1346**	311	294	**605**	1176	1128	**2304**
Piatt	4	2	**6**	6	4	**10**	0	0	**0**	111	86	**197**	111	123	**234**	232	215	**447**
Pike	57	63	**120**	113	136	**249**	233	717	**950**	1661	1610	**3271**	1802	1774	**3576**	3866	4300	**8166**
Pope	2	5	**7**	24	39	**63**	0	0	**0**	1134	646	**1780**	374	388	**762**	1534	1078	**2612**
Pulaski	1	6	**7**	13	23	**36**	0	0	**0**	401	328	**729**	118	159	**277**	533	516	**1049**
Putnam	5	4	**9**	16	21	**37**	42	132	**174**	273	291	**564**	149	213	**362**	485	661	**1146**
Randolph	37	40	**77**	28	54	**82**	48	334	**382**	1255	1007	**2262**	388	489	**877**	1756	1924	**3680**
Richland	10	8	**18**	8	14	**22**	24	106	**130**	465	415	**880**	206	220	**426**	713	763	**1476**

ILLINOIS **COUNTY DEER HARVEST BY SEX FOR EACH HUNTING SEASON -- 2009**

rev. 06/02/10

	Youth			Muzzle			L-W/CWD			Firearm			Archery			ALL SEASONS		
County	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**
Rock Island	10	10	**20**	27	16	**43**	68	207	**275**	499	415	**914**	340	334	**674**	944	982	**1926**
Saline	13	12	**25**	24	33	**57**	30	149	**179**	581	393	**974**	247	253	**500**	895	840	**1735**
Sangamon	19	11	**30**	17	28	**45**	41	132	**173**	478	353	**831**	373	444	**817**	928	968	**1896**
Schuyler	18	18	**36**	32	61	**93**	85	346	**431**	850	837	**1687**	544	444	**988**	1529	1706	**3235**
Scott	3	7	**10**	17	10	**27**	15	77	**92**	274	287	**561**	124	120	**244**	433	501	**934**
Shelby	11	23	**34**	15	38	**53**	40	173	**213**	805	638	**1443**	351	401	**752**	1222	1273	**2495**
St. Clair	9	16	**25**	15	25	**40**	23	107	**130**	532	390	**922**	330	382	**712**	909	920	**1829**
Stark	4	5	**9**	5	17	**22**	14	51	**65**	185	121	**306**	73	79	**152**	281	273	**554**
Stephenson	10	7	**17**	16	21	**37**	68	194	**262**	523	416	**939**	295	231	**526**	912	869	**1781**
Tazewell	12	9	**21**	11	20	**31**	44	134	**178**	386	351	**737**	350	398	**748**	803	912	**1715**
Union	14	18	**32**	35	44	**79**	58	253	**311**	1050	744	**1794**	322	447	**769**	1479	1506	**2985**
Vermilion	16	10	**26**	30	23	**53**	52	238	**290**	466	358	**824**	587	573	**1160**	1151	1202	**2353**
Wabash	6	1	**7**	4	7	**11**	6	32	**38**	182	128	**310**	117	105	**222**	315	273	**588**
Warren	2	0	**2**	8	21	**29**	28	100	**128**	315	299	**614**	166	132	**298**	519	552	**1071**
Washington	5	8	**13**	17	21	**38**	0	0	**0**	654	521	**1175**	200	206	**406**	876	756	**1632**
Wayne	21	21	**42**	31	51	**82**	87	398	**485**	1015	877	**1892**	487	520	**1007**	1641	1867	**3508**
White	17	10	**27**	21	40	**61**	39	241	**280**	589	455	**1044**	335	320	**655**	1001	1066	**2067**
Whiteside	11	7	**18**	21	29	**50**	51	144	**195**	386	386	**772**	267	257	**524**	736	823	**1559**
Will	2	7	**9**	16	11	**27**	0	0	**0**	210	156	**366**	505	451	**956**	733	625	**1358**
Williamson	23	16	**39**	22	28	**50**	0	0	**0**	956	678	**1634**	354	399	**753**	1355	1121	**2476**
Winnebago	5	5	**10**	12	11	**23**	71	121	**192**	267	205	**472**	263	179	**442**	618	521	**1139**
Woodford	10	15	**25**	28	26	**54**	55	202	**257**	511	426	**937**	318	368	**686**	922	1037	**1959**
Unknown																		
Totals	1161	1248	**2409**	1955	2790	**4745**	3926	13979	**17905**	54852	44899	**99751**	32062	32762	**64824**	93956	95678	**189634**
Proportion M:F	0.48	0.52		0.41	0.59		0.22	0.78		0.55	0.45		0.49	0.51		0.50	0.50	
Totals 2008	528	517	**1045**	1851	2515	**4366**	2679	9873	**12552**	57655	48363	**106018**	32232	32688	**64920**	94945	93956	**188901**
	0.51	0.49		0.42	0.58		0.21	0.79		0.54	0.46		0.50	0.50		0.50	0.50	
Totals 2007	417	481	**898**	2023	2364	**4387**	2758	9657	**12415**	69074	48681	**117755**	32616	31531	**64147**	106888	92714	**199602**
Proportion M:F	0.46	0.54		0.46	0.54		0.22	0.78		0.59	0.41		0.51	0.49		0.54	0.46	
Totals 2006	229	871	**1100**	2634	3339	**5973**	2090	7563	**9653**	68849	45894	**114743**	32021	32758	**64779**	105823	90425	**196248**
Proportion M:F	0.21	0.79		0.44	0.56		0.22	0.78		0.60	0.40		0.49	0.51		0.54	0.46	
Totals 2005	242	823	**1065**	1987	2892	**4879**	1304	4076	**5380**	70844	52947	**123792**	34787	31308	**66094**	109164	92046	**201210**
Proportion M:F	0.23	0.77		0.41	0.59		0.24	0.76		0.57	0.43		0.53	0.47		0.54	0.46	
Totals 2004			**612**			**3535**			**5995**			**116675**			**63639**			**190456**
Totals 2003			**383**			**3037**			**1667**			**105873**			**57802**			**168762**
Totals 2002			**308**			**1292**			**2120**			**104478**			**51660**			**159858**
Totals 2001			**298**			**1507**			**2099**			**101304**			**47858**			**153066**

2009 ILLINOIS Deer Harvest -- Breakdown by Season of Sex/Age; Antlered/Antlerless

SEX/Season	Archery	Youth	Muzzleloader	CWD	Late-Winter	Firearm	Total All Gun	Total All Deer Kill
Adult Female	26,549	946	2,264	243	10,507	35,300	49,260	75,809
Fawn Female	6,212	302	526	69	3,160	9,571	13,628	19,840
Unknown Female	1			0	0	28	28	29
Total Female	**32,762**	**1,248**	**2,790**	**312**	**13,667**	**44,899**	**62,916**	**95,678**
Adult Male	25,557	855	1,281	68	41	41,896	44,141	69,698
Non-antlered Adult	141	0	2	26	987	32	1,047	1,188
Total Adult Male	**25,698**	**855**	**1,283**	**94**	**1,028**	**41,928**	**45,188**	**70,886**
Fawn Male	6,364	306	672	66	2,738	12,922	16,704	23,068
Unknown Male	0	0		0	0	2	2	2
Total Male	**32,062**	**1,161**	**1,955**	**160**	**3,766**	**54,852**	**61,894**	**93,956**
Total Deer Season	**64,824**	**2,409**	**4,745**	**472**	**17,433**	**99,751**	**124,810**	**189,634**

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Archery Fawns/Ad Doe	Firearm Fawns/Ad Doe	All Seasons Combined
0.474	0.637	0.566

ILLINOIS – Yearly Deer Harvest 1995-2009

Year	Yth Permits	Yth Harvest	Yth Success	Archery Harvest	Either-sex Permits	Firearm Harvest	Firearm Success	M-L E/S Permits	M-L Harvest	M-L Success	Permits	Late-Winter Harvest	Success	Total
1995		N/A		34,491	190,806	105,067	55.06	5,428	846	15.59	12,064	1,829	15.16	142,233
1996		N/A		35,239	193,319	94,853	49.07	6,438	970	15.07	12,062	1,675	13.89	132,737
1997		N/A		36,763	189,092	93,621	49.51	6,192	1,114	17.99	11,946	1,776	14.87	133,274
1998		N/A		36,328	185,412	95,608	51.57	6,043	1,227	20.30	10,816	2,173	20.09	135,336
1999		N/A		41,310	131,047	92,196	48.26	6,190	1,309	21.15	10,606	1,719	16.21	136,534
2000		N/A		42,900	191,760	103,221	53.83	6,550	1,361	20.78	10,990	2,178	19.82	149,660
2001	1,039	298	28.68	47,858	194,312	101,304	52.13	6,210	1,507	24.27	11,713	2,099	17.92	153,066
2002	1,512	308	20.37	51,660	194,712	104,478	53.66	6,189	1,292	20.88	11,526	2,120	18.39	159,858
2003	2,015	383	19.01	57,802	197,178	105,873	53.69	14,448	3,037	21.02	10,632	1,667	15.68	168,762
2004	2,358	612	25.95	63,639	199,905	116,675	58.37	15,708	3,535	22.50	17,903	5,995	33.49	190,456
2005	3,109	1,065	34.26	66,094	208,148	123,792	59.47	19,998	4,879	24.40	17,106	5,380	31.45	201,210
2006	3,654	1,100	30.10	64,779	209,675	114,743	54.72	20,881	5,973	28.60	12,334	9,653	N/A	196,248
2007	5,205	898	17.25	64,147	212,127	117,755	55.51	24,172	4,387	18.15	10,478	12,415	N/A	199,602
2008	5,960	1,045	17.53	64,920	211,393	106,018	50.15	26,093	4,366	16.73	9,852	12,552	N/A	188,901
2009	8,085	2,409	29.80	64,824	209,949	99,751	47.51	26,149	4,745	18.15	12,352	17,905	N/A	189,634

2009 Preliminary Harvest Data
2009 Firearm and Muzzle-loader Seasons open in 99 of 102 Illinois Counties
2009 Archery Deer Season was open in all 102 Illinois Counties
2009 Youth Firearm Deer Season was open in 99 Illinois Counties for any deer.
Late-Winter was open in 69 Illinois Counties in mid-January, 2009; Unfilled firearm permits were allowed again this year.
5 additional counties were open to CWD Season which was concurrent with late-winter season and harvest included there.
2009 statewide "63.2% Antlerless in harvest overall" for archery was 60.6%; firearm was 64.6%
2008 statewide "62.0% Antlerless in harvest overall" for archery was 60.6%; firearm was 62.7%
2009 statewide "50.5% Female in harvest overall" for archery was 50.5%; firearm was 50.4%
2008 statewide "49.7% Female in harvest overall" for archery was 50.4%; firearm was 49.4%
NOTE: Late-winter "success" cannot be calculated since unfilled permit use was allowed in 2006-07.
Archery permit sales availability intermittent for past years; therefore not provided.
rev. 08/13/2010

2009 Indiana Deer Season Summary

Report to the Midwest Deer and Turkey Study Group

Devil's Lake, ND 2010

Prepared by: Chad M. Stewart

INDIANA DEPARTMENT OF NATURAL RESOURCES

2009 Indiana Deer Harvest Summary

Contents

Federal Aid in Wildlife Restoration Program

This program supports state fish and wildlife agencies to conserve, protect, and enhance fish, wildlife, their habitats, and the hunting, sport fishing and recreational boating opportunities they provide. This program was initiated in 1937 as the Federal Aid in Wildlife Act and created a system where by taxes are paid on firearms, ammunition and archery equipment by the public who hunts. Today this excise tax generates over a hundred million dollars each year that are dedicated to state wildlife restoration and management projects across the United States.

Overview

The 2009 Indiana deer hunting season was comprised of four seasons: Early Archery (Oct. 1 to Nov. 29), Firearms (Nov. 14 to Nov. 29), Muzzleloader (Dec. 5-20), and Late Archery (Dec. 5 to Jan. 3). Additionally, there was a youth-only season Sept. 26-27 that was open to youth age 17 or younger who was accompanied by an adult at least 18 years old. The youth could take one additional antlerless deer during this special season.

The statewide archery bag limit was two deer. Hunters could take one deer per license for a total of either two antlerless deer or one antlered and one antlerless deer. A hunter could take only one antlered deer during all statewide seasons combined using archery, firearm, or muzzleloader licenses. This was the 13th year the crossbow was legal for hunting by non-handicapped hunters under an archery license. The crossbow was eligible for use only during the late archery season and could be used for deer of either sex.

Archers could harvest deer in designated urban zones that did not count towards any other statewide bag limit. Each extra urban zone deer required a separate extra archery license. The archery season in the urban deer zone opened two weeks prior to the opening of the early archery season (Sept. 15 to Nov. 30), and continued again into January (Dec. 6 to Jan. 4). Archers were allowed to harvest up to either four antlerless deer or three antlerless and one antlered deer during this period. Any deer harvested during this period were in addition to all other bag limits.

The bag limit during firearms season was one antlered deer, and the bag limit for the muzzleloader season was one either sex deer (maximum of one antlered deer harvested per hunter). A single firearms license was required to hunt with any or all shotgun, muzzleloader, rifle, or handgun during the firearms season, and a muzzleloader license (separate from the firearms license) was required to hunt during the muzzleloader season.

The resident deer license fee was $24 and the nonresident fee was $150. When an agricultural advantage could be gained, resident landowners who hunted on land they own were exempt from purchasing deer licenses, as were lessees.

Special public hunts were held at Muscatatuck and Big Oaks National Wildlife Refuges, Naval Surface Activity Crane, Newport Chemical Depot, and Camp Atterbury Joint Maneuver Training Center.

Bonus Antlerless Permits

An unlimited number of bonus antlerless permits were available at every deer license vendor statewide, and each permit could be used in any county. County bag limits ranged from A to 8 (Figure 1). Permits were available to both resident and non-resident hunters.

Each permit was valid for one antlerless deer, and hunters were allowed to take as many bonus antlerless deer as desired, as long as the county antlerless bag limits were observed. Bonus antlerless permits cost $24 and $150 for the first permit for residents and nonresidents, respectively. The second and each additional permit was $15 for residents and $24 for nonresidents. Bonus antlerless permits could be used during all deer hunting seasons except for "A"-designated counties, where the license could only be used during the last four days of the firearms season (Nov. 26 to Nov. 29) plus the late archery and muzzleloader seasons.

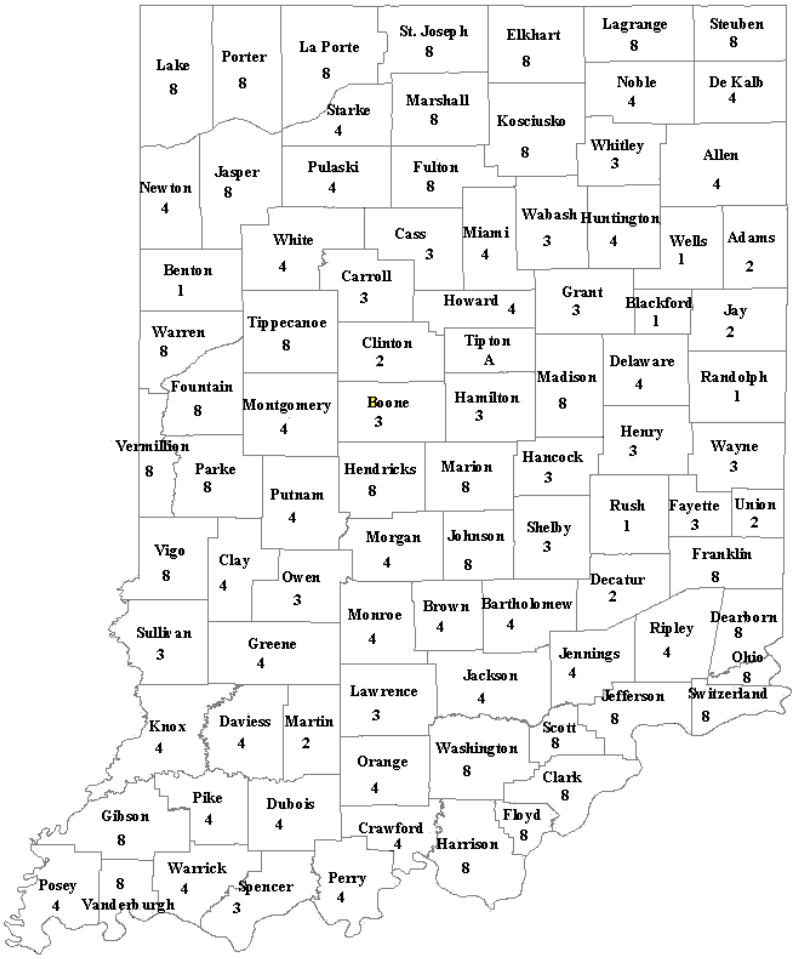


Figure 1. Antlerless deer bag limits in 2009.

Deer Harvested by Season

A total of 132,752 deer were legally harvested in Indiana during the 2009 season (Figure 2). This harvest was 2% higher than the 129,748 deer harvested during the 2008 season. The antlered deer harvest of 52,981 represented a nearly 4% increase from the 50,845 harvested last year. The antlerless harvest of 79,771 was 1% more than the 78,903 harvested in 2008. In 2009, the harvest for total deer and antlerless deer ranks as the highest reported kill for each category in history. The antlered harvest ranks second all-time.

Approximately 2.73 million deer have been legally harvested during the past 57 deer hunting seasons in Indiana.

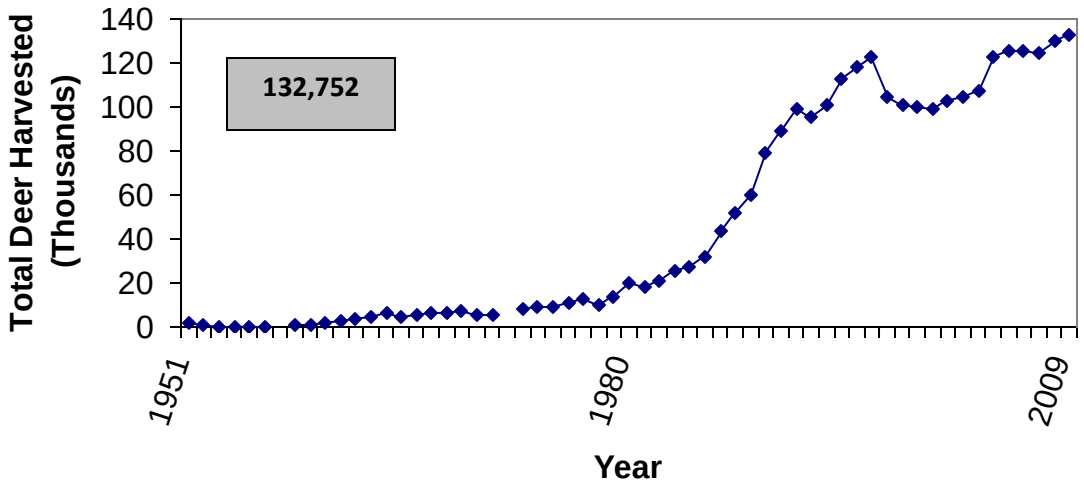


Figure 2. The number of deer harvested in Indiana deer hunting seasons 1951-2009.

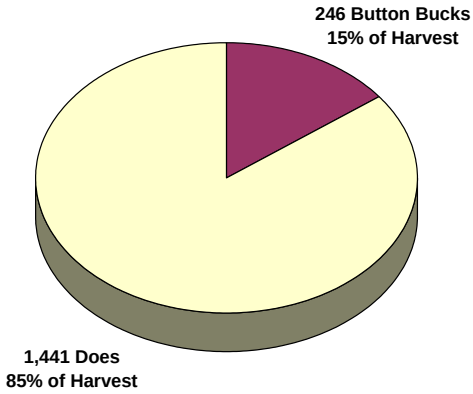


Figure 3. 2009 Youth Season harvest composition.

The hunting season began with urban deer zones (Sept. 15) followed by a youth only weekend (Sept. 26-27). This season was created in 2006 and allowed youths 15 years and younger to harvest one antlerless deer. It was changed this year to include all youths 17 years and younger. A total of 1,687 deer were harvested in 2009 during this season, up 38% from the 1,219 from 2008. This season resulted in 1% of the total harvest (Table 1). Only 15% of the harvest was comprised of button bucks (Figure 3).

The early archery season harvest (including the early Urban Deer Zones) of 27,818 deer comprised 21% of the total harvest and was nearly 8% more than the 25,800 harvested in 2008 (Table 1). The late archery season comprised 1% of the total harvest, similar to the 2008 season. The combined archery seasons yielded 29,416 deer, an increase of 9% from the 26,921 harvested in 2008. Antlerless deer comprised 65% of the total archery harvest, similar to 2008's antlerless composition. Antlerless harvest in early archery season was 64%, while in late archery it was 81% (Figure 4). Does made up 55% of the total harvest in early archery season and nearly 70% of the harvest in late archery season.

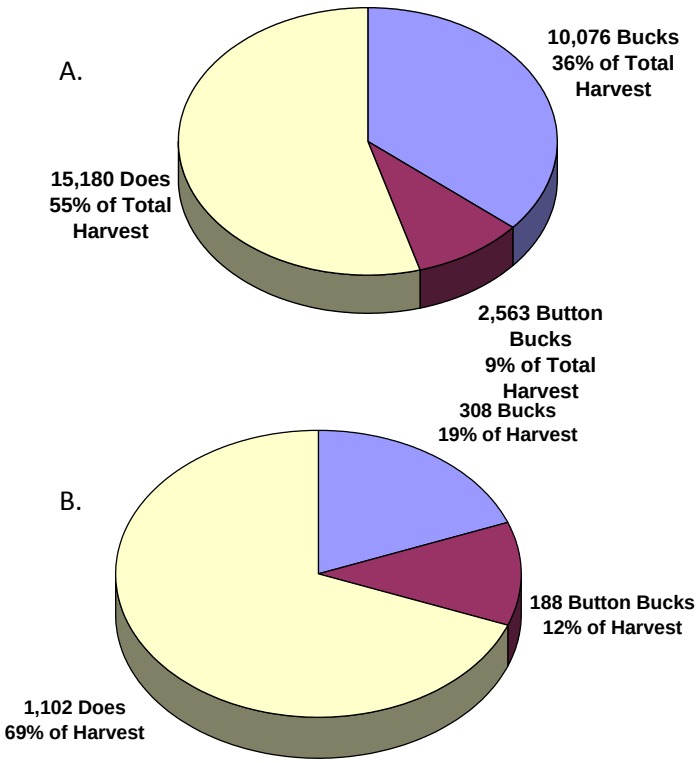


Figure 4. A. Early Archery harvest and B. Late Archery harvest composition in 2009

Table 1. Number of deer harvested in each segment of the 2009 Indiana deer hunting season. Percent of total harvest in parentheses (totals may not be exactly 100 due to rounding).

Season	Number of deer harvested		
	Antlered	Antlerless	Total
Youth season* (26-27 Sept)	0	1,687 (2)	1,687 (1)
Early Archery** (1 Oct - 29 Nov)	10,076 (19)	17,742 (22)	27,818 (21)
Firearms (14-29 Nov)	38,921 (74)	44,175 (55)	83,096 (63)
Muzzleloader (5-20 Dec)	3,675 (7)	14,878 (19)	18,553 (14)
Late Archery (5 Dec - 3 Jan)	308 (1)	1,290 (2)	1,598 (1)
Totals	52,980	79,772	132,752

*Antlerless deer season only
**Includes the early Urban Deer Zone Starting on 15 September

The firearms season harvest of 83,096 deer was a decrease of nearly 4% from the 86,454 deer harvested in 2008 and comprised 63% of the total harvest (Table 1). The antlerless harvest (44,175) was less than the 2008 antlerless harvest (48,130), though the antlered harvest (38,921) for this season was slightly higher than the antlered deer harvest in 2008 (38,324). Antlered deer made up at least half of the total harvest on the first five days of firearm season, while antlerless deer outnumbered antlered deer during the remaining eleven days of the season (Table 2). During the opening weekend of firearms season, 43% of the total firearm season harvest occurred, up from 36% in 2008. Opening weekend contributed to 27% of the statewide total harvest for all seasons, which is 3 percentage points more than opening weekend harvest from 2008. Antlerless deer comprised 54% (82% of which were does) of the firearm season harvest (Figure 5).

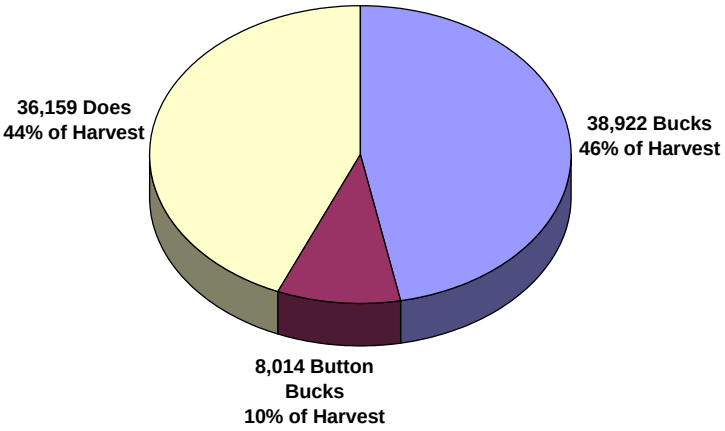


Figure 5. 2009 Firearms season harvest composition

Table 2. Number of deer harvested on each day of the 2009 Indiana firearm season (includes deer taken by bow, shotgun, pistol, rifle, and muzzleloader.

		Antlered		Antlerless		Total	
Date	Day	N	Daily %	N	Daily %	N	Total %
14 November	Sat	14,670	59	10,162	41	24,832	30
15 November	Sun	6,157	56	4,909	44	11,066	13
16 November	Mon	1,941	54	1,652	46	3,593	4
17 November	Tue	1,315	50	1,307	50	2,622	3
18 November	Wed	1,349	52	1,217	48	2,566	3
19 November	Thu	1,216	49	1,289	51	2,505	3
20 November	Fri	1,463	43	1,920	57	3,383	4
21 November	Sat	3,029	39	4,667	61	7,696	9
22 November	Sun	1,970	37	3,291	63	5,261	6
23 November	Mon	642	37	1,114	63	1,756	2
24 November	Tue	518	36	922	64	1,440	2
25 November	Wed	461	32	965	68	1,426	2
26 November	Thu	753	33	1,501	67	2,254	3
27 November	Fri	1,138	29	2,787	71	3,925	5
28 November	Sat	1,591	27	4,362	73	5,953	7
29 November	Sun	1,034	28	2,639	72	3,673	4
Totals*		39,247		44,704		83,951	100

*** Totals differ from those in previous table because date of harvest is not known for some registered deer and this table includes deer from both the firearms season and the last 16 days of the early archery season.**

The muzzleloader season harvest of 18,553 comprised 14% of the total harvest, up 2 percentage points from last year (Table 1). This year's muzzleloader season harvest was 22% higher than the 2008 muzzleloader harvest (15,154). As in years past, a large percentage of the deer harvested during the muzzleloader season were antlerless (80%) (Figure 6).

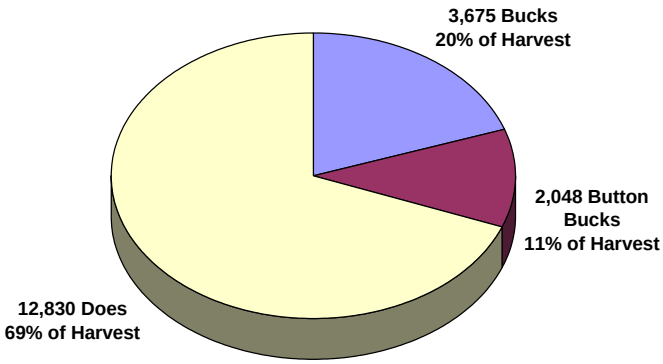


Figure 6. 2009 Muzzleloader season harvest composition

Harvest by Equipment Type

Six types of equipment were legal for hunting deer during 2009: bows, shotguns, muzzleloaders, handguns, crossbows, and rifles. Rifle cartridges were restricted to .357 diameter or larger bullet, and case length must be between 1.16 and 1.625 inches. These types of equipment accounted for 21%, 50%, 25%, 1%, 2%, and 1% of the total deer harvest, respectively (Figure 7). Shotgun harvest decreased 4% from 2008. Harvest by muzzleloader and bow increased 7% and 8% from 2008, respectively (Table 3). Only 4% of the harvest is made up of the remaining three equipment choices.

The total crossbow harvest for the year, including deer taken on disabled hunter crossbow permits, was 927 animals compared with the 827 harvested in 2008. During the late archery season, the crossbow harvest was 182 deer, compared with 159 in 2008 and 154 in 2006 (Table 3). Harvest with rifles increased this year by 57% compared to 2008, and is up 133% since 2007, the initial year they could be used. There are no check boxes for rifles on the current deer check harvest forms, so actual numbers may be higher than reported.

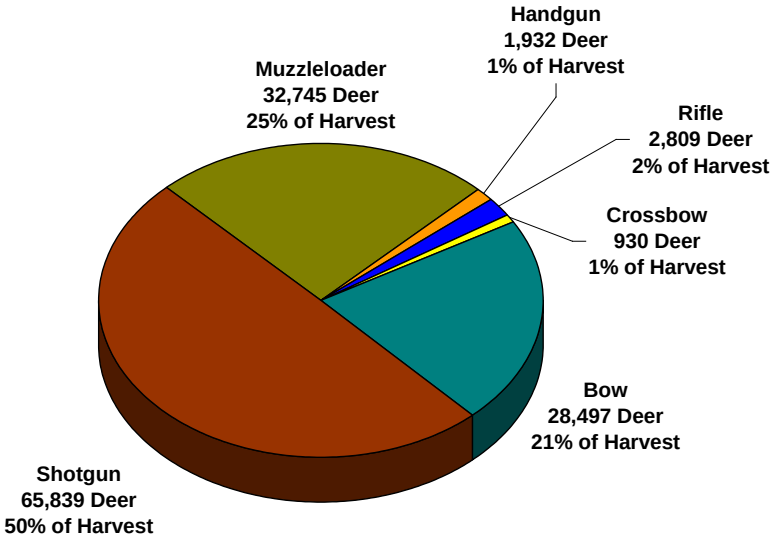


Figure 7. 2009 harvest by equipment type in Indiana

Table 3. Number of deer harvested by type of legal hunting equipment during the 2004-2009 seasons. Approximate percent of total harvest shown in parentheses.

Equipment type	2004	2005	2006	2007	2008	2009
Bow*	21,498 (18)	23,692 (19)	26,723 (21)	26,187 (21)	26,369 (20)	28,497 (21)
Shotgun	71,251 (58)	70,022 (56)	66,304 (53)	63,919 (51)	68,520 (53)	65,839 (50)
Muzzleloader	28,182 (23)	29,686 (24)	30,247 (24)	30,740 (25)	30,295 (23)	32,745 (25)
Handgun	1,620 (1)	1,606 (1)	1,386 (1)	1,615 (1)	1,949 (2)	1,932 (1)
Rifle	x	x	x	1,203 (1)	1,788 (1)	2,809 (2)
Crossbow						
Disabled	405(0)	427(0)	591 (0)	609 (0)	668 (1)	748 (1)
Late archery	102 (0)	93 (0)	130 (0)	154 (0)	159 (0)	182 (0)
Totals	123,058	125,526	124,562	124,427	129,748	132,752

*** Crossbow harvest is not included in bow harvest. Values within this table do not exactly equal those tallied by season (page 3) due to the fact that multiple equipment types can be used during the firearm season. Muzzleloaders may also be used during both the firearm and muzzleloader season. Additionally, differences arise due to the different methods required to analyze data when either the equipment or the season is unknown.**

Harvest by License Status

Licensed resident hunters (lifetime, resident, and youth license holders) accounted for over 81% of the total deer harvest (Table 4). Licensed nonresident hunters harvested nearly 2% of the total harvest. Hunters with a regular yearly deer hunting license (resident plus non-resident) took only 45% of the total deer harvest; hunters not paying the full yearly price (i.e. lifetime license holders, youth license holders, landowners/tenants, and military personnel) took nearly 55% of the total harvest. Landowners and lessees who hunted on their own land without a license and military personnel on official leave status accounted for almost 17% of the total deer harvest. Of the deer harvested by license-exempt hunters, nearly 99% were taken by landowners/tenants while only 1% by military personnel on leave.

Table 4. Harvest distribution of deer by license type during 2009 hunting season.

License Status	Deer Harvested	Percent of Harvest
Resident	57,065	42.99
Lifetime	39,031	29.40
Land Owner	22,042	16.60
Youth	11,772	8.87
Nonresident	2,565	1.93
Military	277	0.21
Total	132,752	100.00

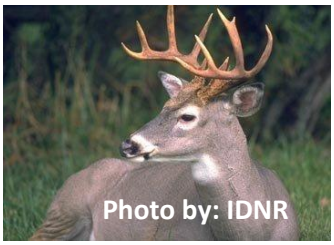
Harvest Age and Sex Structure

The age and sex structure of the 2009 deer harvest was 40% adult males (antlered bucks), 36% adult females, 10% male fawns (button bucks), and 14% female fawns (Table 5). These percentages are similar to the harvest in 2008. About 36% of the antlered bucks and 34% of the adult does harvested during 2009 were yearlings (1.5 years old) (Figure 8).

Table 5. Sex and age structure of the Indiana deer harvest during 1987-2009, as determined from mandatory check stations.

	Adults		Fawns		
Year	Males (%)	Females (%)	Males (%)	Females (%)	Total
1987	29,530 (57)	11,139 (21)	6,164 (12)	4,945 (10)	51,778
1988	34,358(57)	13,170 (22)	7,050 (12)	5,656 (10)	60,234
1989	40,503 (51)	19,464 (24)	10,737 (14)	8,614 (11)	79,318
1990	43,080 (48)	23,680 (27)	12,373 (14)	9,630 (11)	88,763
1991	41,593 (42)	31,211 (32)	14,626 (15)	11,253 (11)	98,683
1992	43,508 (46)	25,387 (27)	14,262 (15)	12,157 (13)*	95,314
1993	44,424 (44)	27,704 (27)	14,751 (15)	14,335 (14)*	101,214
1994	50,812 (45)	32,466 (29)	15,487 (14)	13,651 (12)*	112,416
1995	47,098 (40)	40,946 (35)	16,398 (14)	13,287 (11)*	117,729
1996	47,315 (38)	39,913 (32)	17,307 (14)	18,551 (15)*	123,086
1997	42,537 (41)	35,163 (34)	14,039 (13)	13,198 (12)*	104,937
1998	44,955 (45)	30,711 (31)	12,257 (12)	12,538 (12)*	100,461
1999	46,371 (46)	30,474 (31)	11,645 (12)	11,129 (11)*	99,618
2000	44,621 (45)	31,986 (32)	11,072 (11)	11,046 (11)*	98,725
2001	48,357 (47)	31,806 (31)	11,230 (11)	11,770 (11)*	103,163
2002	47,177 (45)	35,357 (34)	11,291 (11)	10,603 (10)*	104,428
2003	49,533 (46)	36,303 (34)	10,262 (10)	10,887 (10)*	106,986
2004	54,743 (44)	41,749 (34)	12,501 (10)	14,065 (11)*	123,058
2005	52,488 (42)	44,286 (35)	13,030 (10)	15,722 (13)*	125,526
2006	49,097 (39)	45,257 (36)	13,688 (11)	17,339 (14)*	125,381
2007	49,375 (40)	44,514 (36)	13,313 (11)	17,225 (14)*	124,427
2008	50,845 (39)	46,666 (36)	13,083 (11)	19,154 (15)*	129,748
2009	52,981 (40)	48,367 (36)	13,058 (10)	18,336 (14)*	132,752

*** Number of adult and fawn females is projected from the % fawns of all females aged at the biological check stations (not from the ratio of fawn doe to fawn bucks in the total deer harvest).**



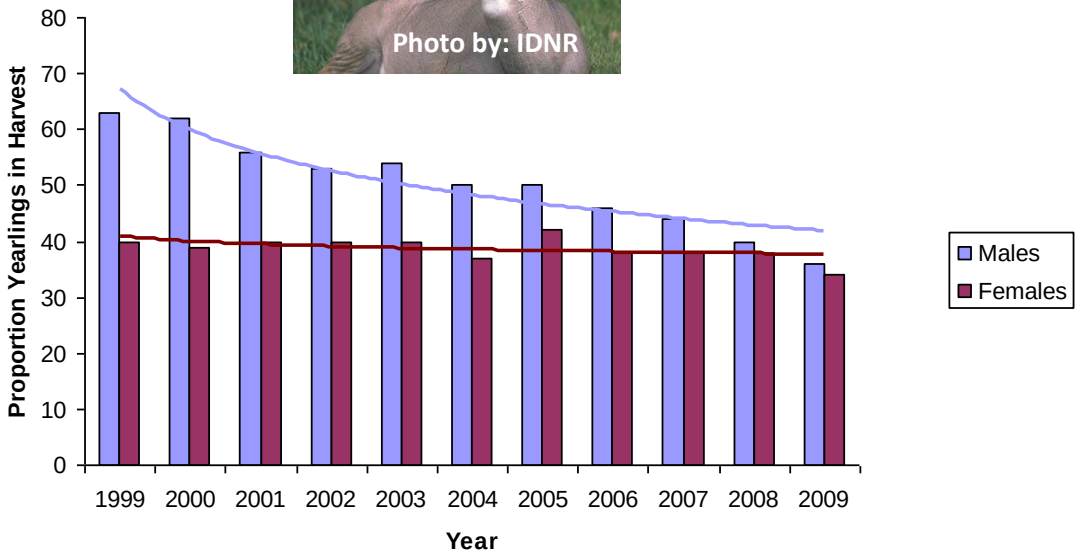


Figure 8. Proportion of male and female yearlings in the harvest (1.5 years old), as determined by aging during the first weekend of the firearms season, for years 1999-2009.

Deer License Sales

Deer license sales increased this year from 2008 by nearly 5%, up to 271,919 (Table 6). Youth licenses increased nearly 3% from 2008. License sales from all categories were up, with the greatest increases seen in the Resident Muzzleloader license and the Military/Refuge licenses (11% and 9% increase, respectively). Resident Firearm licenses comprised the largest proportion deer licenses sold (39%), followed by Bonus Antlerless licenses (26%).

Table 6. Deer license sales in Indiana by type, 2007-2009.

	2007	2008*	2009*
Resident Archery/Extra Archery	51,238	54,414	58,748
Resident Firearm	98,925	103,562	105,150
Resident Muzzleloader	19,670	20,983	23,356
Resident Military/Refuge	2,044	2,460	2,684
Resident Bonus Antlerless	61,389	68,792	71,511
Nonresident	9,449	9,660	10,470
Youth	34,994	37,295	38,330
Total (excluding Youth)	242,715	259,871	271,919

*Includes associated apprentice licenses

Distribution of the Harvest

The number of deer harvested in individual counties ranged from 96 in Tipton County to 4,102 in Steuben County (Table 7). Harvest exceeded 1,000 deer in 62 counties; 2,000 deer in 19 counties; and 3,000 deer in five counties. The antlered buck harvest exceeded 1,000 in ten counties (up from 5 in 2008), while the antlerless harvest exceeded 1,000 deer in 31 counties compared with 29 in 2008. Antlerless deer comprised at least 50% of the total harvest in 87 of the state's 92 counties in 2009 compared with 88 counties in 2008. The counties with the highest harvests were Steuben, Kosciusko, Switzerland, Noble, Franklin, Dearborn, Marshall, Parke, Harrison, and Washington. The counties with the lowest harvests were Tipton, Benton, Hancock, Marion, Blackford, Shelby, Clinton, Rush, Boone, and Howard.

Table 7. Number of deer harvested in each Indiana county during 2009 (after adjustment for unknowns).

	Number Harvested				Number Harvested		
County	Antlered	Antlerless	Total	County	Antlered	Antlerless	Total
Adams	250	288	538	Lawrence	850	1,141	1,991
Allen	733	1,048	1,781	Madison	223	435	658
Bartholomew	505	718	1,224	Marion	176	134	310
Benton	73	52	125	Marshall	1,049	1,888	2,936
Blackford	152	185	337	Martin	712	937	1,650
Boone	204	217	421	Miami	580	931	1,511
Brown	714	1,255	1,968	Monroe	592	888	1,480
Carroll	412	535	947	Montgomery	335	507	842
Cass	614	821	1,434	Morgan	533	759	1,291
Clark	644	946	1,586	Newton	437	559	996
Clay	489	554	1,044	Noble	1,066	2,021	3,086
Clinton	162	182	344	Ohio	424	690	1,114
Crawford	775	1,044	1,819	Orange	865	1,197	2,062
Daviess	430	606	1,036	Owen	814	939	1,753
Dearborn	1,138	1,843	2,981	Parke	1,152	1,729	2,881
Decatur	293	428	721	Perry	794	953	1,747
DeKalb	953	1,502	2,455	Pike	660	829	1,489
Delaware	309	532	841	Porter	577	910	1,487
Dubois	683	1,180	1,863	Posey	675	899	1,573
Elkhart	546	1,003	1,549	Pulaski	632	953	1,586
Fayette	359	501	860	Putnam	926	1,133	2,059
Floyd	251	320	570	Randolph	266	302	568
Fountain	585	736	1,322	Ripley	762	1,113	1,875
Franklin	1,096	1,967	3,063	Rush	165	178	344
Fulton	760	1,369	2,130	St. Joseph	579	1,014	1,594
Gibson	665	830	1,495	Scott	373	575	948
Grant	323	478	802	Shelby	143	200	342
Greene	845	1,204	2,049	Spencer	644	722	1,366
Hamilton	228	311	539	Starke	639	1,059	1,698
Hancock	118	163	281	Steuben	1,273	2,829	4,102
Harrison	1,146	1,630	2,776	Sullivan	825	938	1,764
Hendricks	306	321	627	Switzerland	1,167	2,056	3,223
Henry	255	346	600	Tippecanoe	601	799	1,400
Howard	190	337	527	Tipton	54	42	96
Huntington	488	744	1,232	Union	242	330	572
Jackson	805	1,218	2,023	Vanderburgh	347	420	767
Jasper	584	1,016	1,601	Vermillion	528	686	1,214
Jay	372	642	1,014	Vigo	622	810	1,432
Jefferson	806	1,313	2,119	Wabash	670	1,072	1,742
Jennings	702	1,064	1,766	Warren	463	749	1,212
Johnson	260	439	699	Warrick	628	782	1,410
Knox	447	435	883	Washington	1,032	1,594	2,626
Kosciusko	1,214	2,437	3,652	Wayne	482	635	1,117
Lagrange	785	1,796	2,582	Wells	269	263	532
Lake	577	681	1,258	White	491	730	1,222
La Porte	863	1,403	2,267	Whitley	531	800	1,332

*** Totals may be off +/- 1 due to rounding during partitioning of harvested deer of unknown sex or county.**

Disease Monitoring

Epizootic Hemorrhagic Disease

No reports of Epizootic Hemorrhagic disease were received during 2009.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is one of a group of diseases called Transmissible Spongiform Encepalopathies, which is a variant of scrapie in sheep and Creutzfeldt-Jakob disease in humans. The agents of CWD are called prions which are abnormal, protease-resistant forms of cellular proteins normally synthesized in the central nervous system and lymphoid tissues. Prions that cause CWD are highly resistant to heat or disinfectant. No study has ever proven that CWD is transmissible to humans.

CWD has been reported in Wisconsin, Illinois, West Virginia, and most recently Virginia, among other states. In 2002, Indiana created a monitoring program to detect the presence of CWD, which focused on removing the obex or the retropharyngeal gland from random hunter harvested deer throughout the state, deemed active surveillance. Reports of outwardly noticeable sick deer have also been tested, named targeted surveillance. This monitoring continues today, and well as testing random samples of road killed deer which was instituted in 2007.

Results from the Division of Fish and Wildlife's 2009 CWD sampling have been completed, and tests failed to detect CWD in 835 deer during the 2009 year. CWD has not been detected in over 11,000 deer during this monitoring period.

Bovine Tuberculosis

In September 2008, a cow in Franklin County, Indiana tested positive for Bovine Tuberculosis (TB). In May 2009, several red deer from a captive cervid operation less than ½ mile away tested positive for TB at a slaughterhouse. The subsequent depopulation of the cervid herd resulted in an infection rate of 56%; no other cow tested positive for TB.

Interstate transport records of captive cervids discovered two additional facilities that had purchased TB positive animals from the Franklin county cervid operation. These two facilities were located in Harrison and Wayne counties. These herds were depopulated and found no additional positive TB animals.

The Division of Fish and Wildlife, along with the help of the Indiana Board of Animal Health and the United States Department of Agriculture mobilized staff to collect and test free ranging white-tailed deer at check stations during the opening weekend of firearms season in counties where captive cervids were identified. A total of 431 hunter harvested deer were sampled in these and surrounding counties. A total of 56 deer were determined to have visibly lesioned lymph nodes that weekend, and tissue from those deer were immediately sent to the National Veterinary Services Laboratory (NVSL) in Ames, IA for culturing. Those deer have all been classified as TB free. An additional 14 deer were identified as having lesioned lymph nodes by Purdue's Animal Disease and Diagnostic Lab. Preliminary tests failed to detect the presence of TB. Those samples, and the tissue from the remaining 361 deer, are currently being cultured and awaiting final results from NVSL.

For more information on deer health, visit www.in.gov/dnr/fishwild.

DNR biologists collect disease samples to monitor the health of the Indiana deer herd.

Kansas Deer Report

2009 – 2010 Michigan Deer Status Report
34TH Midwest Deer and Wild Turkey Study Group Meeting
22 – 25 August, 2010 · Devils Lake, ND

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2009 Michigan Deer Seasons and Licenses

During 2009, white-tailed deer (*Odocoileus virginianus*) in Michigan could be harvested primarily during the following hunting seasons: youth, archery, regular firearm, muzzleloader, early antlerless, late antlerless, and special hunts for disabled hunters. In order to harvest a deer, hunters had to possess a hunting license (firearm, archery, combination, or antlerless license). A harvest tag was issued as part of the hunting license. Hunters could purchase a maximum of two licenses for taking an antlered deer (either one combination license or both a firearm and an archery license). Archery and firearm licenses included one harvest tag, while the combination license had two harvest tags. A firearm license allowed a person to take one deer with at least one antler three inches or longer. An archery license allowed an individual to take one deer of either sex. A person with a combination license could take two deer of either sex during the archery season, two antlered deer during the firearm season, or one deer during each season. If two antlered deer were taken, regardless of type of license, one needed to have at least one antler with four or more points (qualifying points must be at least one inch).

Antler point restrictions adopted in 2008 for the taking of antlered deer (bucks) in the UP remained in place. Under this regulation, the regular buck tag of a combination deer license could only be used to tag a buck with at least three antler points on one side. The restricted tag could only be placed on a buck with a minimum of four points on one side. Hunters who chose not to purchase the combination tag were restricted to one buck only (without any new antler point restrictions) in the UP, all seasons combined, even if they purchased both archery and firearms licenses.

Antlerless licenses could be purchased in addition to archery, firearm, or combination licenses. Antlerless deer licenses allowed hunters to take deer without antlers or with antlers shorter than three inches during any season with equipment appropriate for the season. Use of each antlerless license was restricted to a single deer management unit (DMU) designated at the time of purchase. Antlerless licenses were available for most of the state, except in nine DMUs in the UP and four DMUs in the Lower Peninsula (LP). Antlerless licenses were issued specifically for either public or private lands. Public land antlerless licenses were not available in all DMUs that had private land licenses. The number of licenses available in DMUs open to antlerless deer hunting was established by the NRC.

A private land antlerless deer hunting license was valid for taking antlerless deer only from privately-owned lands within the DMU specified on the license with permission of the landowner. Two new meta-DMUs which conglomerated multiple DMUs were created. DMU

487 includes private land in the majority of the southern Lower Peninsula. DMU 486 merges private land from several smaller DMUs in the TB zone of northeast Lower Peninsula. A private land license was not valid on land enrolled in the Commercial Forest Act program (Commercial Forest Lands). Antlerless licenses for DMUs where demand was expected to exceed supply were allocated using a random drawing. In DMUs where supply of licenses was expected to exceed demand, antlerless licenses could be purchased directly from a license vendor on a first-come, first-served basis. To purchase a private land antlerless license, hunters had to provide the contact phone number of the private landowner granting permission to deer hunt in the DMU. Hunters were limited to a maximum of five private land antlerless deer licenses, of which no more than two could be for the UP and the Northern LP, excluding the area in the northeast LP where management focuses on eradication of bovine tuberculosis from the deer herd. Hunters could purchase one private land antlerless deer license each day, up to the season limit of five.

A public land antlerless deer hunting license allowed an individual to hunt for antlerless deer on publicly-owned lands (including state, federal, and county lands) open to hunting and Commercial Forest Lands within the DMU for which it was issued. A public land license was invalid on any privately-owned lands except Commercial Forest Lands. Antlerless licenses for use on public lands were allocated among people that applied for these licenses using a random drawing. In select DMUs, licenses available after the drawing was completed were made available on a first-come, first-served basis. Hunters could purchase one left-over antlerless license for public lands per day until the license quota had been met. Hunters could not purchase both a public land and private land antlerless license on the same day.

Deer Management Assistance (DMA) permits were special antlerless permits issued to landowners where the number of antlerless licenses was insufficient to meet the objective of specific landowners (e.g., controlling disease, crop damage, or deer abundance). These permits allowed hunters to take one antlerless deer per permit during any deer season on the land where issued or adjacent private lands with the landowner's permission. To use these permits, the hunter also must have purchased a valid deer hunting license for the season in which they were hunting and abide by all other hunting regulations.

Managed Deer Hunt permits were antlerless permits that could be used during special seasons on some public lands (e.g., state parks, state wildlife areas, and some federal land). These permits were issued by special random drawings. To use these permits, the hunter also must have purchased a valid deer hunting license and abide by all other hunting regulations.

The youth firearm season was held during September 26-27 on public and private lands statewide. Youths 10-16 years of age could take one deer of either sex using a firearm license or combination license. Only an antlerless deer could be taken with an antlerless license or DMA permit. Youths participating during this season had to be accompanied by an adult at least 18 years old. Youths 10 and 11 years of age were restricted to archery-only equipment. Youths 12 and 13 years of age could use archery equipment or firearms, but firearm hunting was restricted to only private land. Youth hunters could take no more than one deer during the season.

The archery season occurred statewide on public and private lands. This season was divided into an early and late season (October 1 through November 14 and December 1, 2009, through January 1, 2010). Archery licenses, antlerless licenses, combination licenses, and DMA permits could be used to take deer during the archery seasons using archery equipment.

Deer could also be taken during the special disabled firearm hunt October 15-18, 2009. Hunters could take deer on private lands or public lands requiring an access permit. Only

hunters that were issued a permit to hunt from a standing vehicle; veterans with 100% disability as defined by the United States Department of Veterans Affairs, and legally blind people could participate in this season. A veteran with 100% disability also could take a deer during the youth firearm season (September 26-27).

The statewide regular firearm season occurred November 15-30. The muzzleloader season was held December 4-13 in the Upper Peninsula (UP), December 11-20 in the northern LP, and December 4-20 in the southern LP. Hunters were allowed to take deer on both public and private lands with firearm and combination deer hunting licenses during the regular firearm and muzzleloader seasons. Antlerless licenses (including DMA permits) also could be used during the firearm seasons.

The early antlerless firearm season occurred from September 17-21. The late antlerless firearm season occurred from December 21, 2009, through January 1, 2010. Hunters pursuing deer during these seasons had to have purchased an antlerless license and possess an unused antlerless harvest tag (including DMA permits) and were limited to hunting on private land. The area open to hunting during the early antlerless season was limited to all or portions of 47 counties in the LP. The area open to hunting during the late antlerless season was limited to 44 counties in the LP.

Hunters 12-years-old or older could use a crossbow to hunt deer during any season when a firearm was allowed. In addition, anyone who was 50 years or older could use a crossbow during the October 1 through November 14 portion of the archery season, with an archery license. And in southern Michigan, anyone 12 and older could hunt deer with a crossbow during any deer hunting season as long as they have the appropriate licenses. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNRE-issued crossbow permit, did not need the stamp.

Mail Survey and Harvest Results

Michigan uses an annual mail survey of hunters following completion of the deer hunting season to estimate hunter participation, harvest, and hunting effort. The Wildlife Division also provided all hunters the option to report information about their deer hunting activity voluntarily via the internet. This option was advertised through a statewide news release and on the DNR web site, and an email message was sent to all license buyers that had provided an email address to the DNR (84,186 licensees). Questions in the 2009 harvest survey questionnaire were also designed to investigate hunter satisfaction with the 2009 hunting season and deer numbers, to gauge support for the antler point restrictions that were enacted in the UP, and to investigate whether these restrictions had influenced deer hunting activity (hunting effort, harvest, and satisfaction) in the UP. Following the 2009 deer hunting seasons, a questionnaire was sent to 51,154 randomly selected individuals who had purchased a hunting license (firearm, archery, antlerless, or combination deer hunting licenses) and had not already voluntarily reported harvest information via the internet. Hunters receiving the questionnaire were asked to report seasons in which they pursued deer, number of days spent afield, and number of deer harvested. Hunters were instructed not to report hunting effort and harvest associated with DMA permits because landowners obtaining these permits already were required to report the number of deer harvested to the DNR.

In 2009, 725,190 people purchased a license to hunt deer in Michigan. The number of people buying a license in 2009 was virtually unchanged from 2008. The number of 2009 deer harvest tags sold for all license types combined was also essentially equal to that from 2008 (Table 1). License buyers were issued an average of 2.2 harvest tags. About 48% of the license buyers purchased at least one antlerless license.

The antlerless license quota on private lands was increased 15% from 572,200 in 2008 to 659,800 licenses in 2009. Most of this increase in quota on private lands was attributed to the quota for new multi-county DMUs 486 and 487; these multi-county DMUs for private lands were created in 2009. The quota for public land antlerless licenses increased 4% from 65,900 to 68,300 between 2008 and 2009. Although the 2009 antlerless quota increased 14% from 2008, the number of antlerless licenses sold changed little between 2008 and 2009.

About 94.6% of the people buying a license in 2009 actually spent time hunting deer. Most hunters (628,625) pursued deer during the regular firearm season. Statewide, the number of people hunting deer during all seasons combined decreased 1% from 2008. About 42% of the days hunters spent pursuing deer throughout the state occurred in the regular firearm season and 43% occurred during the archery season. Nearly 13% of the hunting effort occurred in the other hunting seasons (muzzleloader, early antlerless, late antlerless, youth, and disabled hunter seasons). Statewide, hunters devoted an average of 15.2 days afield hunting deer during all seasons combined. Hunting effort increased significantly during the late antlerless (48%), muzzleloader (14%) and archery (8%) seasons. Hunting effort was unchanged during the regular firearm, early antlerless, youth, and disabled seasons between 2008 and 2009.

Nearly 445,000 deer were harvested in 2009, a decrease of about 9% from the number taken in 2008 (Table 2). Statewide, the harvest of antlered deer and antlerless deer decreased 14% and 5%, respectively. About 53% of the deer harvested (sexes combined) in 2009 were taken during the regular firearm season. Nearly 46% of the antlerless deer and 62% of the antlered bucks were harvested in the regular firearm season. Hunters took 27% of the harvested deer (sexes combined) during archery season. During the archery season, hunters took 24% of the antlerless deer and 30% of the antlered bucks harvested.

Statewide, 43% of the deer hunters harvested at least one deer (all deer seasons and sexes combined) in 2009. About 24% of the hunters took an antlerless deer, and 28% took an antlered buck in 2009. About 15% of deer hunters harvested two or more deer. Hunters were most successful in taking a deer during the regular firearm season; 32% of the hunters in this season took a deer. Nearly 21% of the hunters took an antlered buck and 14% harvested an antlerless deer during the regular firearm season. Hunter success was lowest in the muzzleloader season (19% successful).

Deer hunters were asked to report how satisfied they were with (1) number of deer seen, (2) number of antlered deer [bucks] seen, (3) number of deer taken, and (4) their overall hunting experience. Statewide, less than 40% of hunters were satisfied with numbers of deer seen, bucks seen, deer taken, and their overall hunting experience in 2009. Furthermore, satisfaction declined for all areas between 2008 and 2009. Highest levels of satisfaction were reported among hunters in the southern LP.

Statewide, about 49% of hunters supported the antler point restrictions on buck harvest implemented for the UP, and about 53% of the hunters that preferred to hunt in the UP supported the antler point restrictions. Statewide and regional levels of support for the antler point restrictions did not change significantly between 2008 and 2009.

Statewide, most deer hunters (84%) supported maintaining the November 15 opening date for the regular firearm season. In contrast, only 10% of deer hunters opposed maintaining this date. About 42% of deer hunters statewide supported opening the regular firearm season on the Saturday nearest to November 15 each year; while 49% opposed opening on this Saturday. Moreover, 20% of deer hunters statewide supported opening the regular firearm season on the Saturday before Thanksgiving each year; while 69% were opposed to opening the season on this Saturday.

About 56,915 hunters used a crossbow during the archery season, and they harvested about 24,882 deer with the crossbow. About 36% of these archers using a crossbow harvested a deer with a crossbow. Hunters using a crossbow to hunt deer were required to obtain a crossbow stamp, unless they were a disabled hunter that already had a DNRE-issued crossbow permit. About 60% of the archers using a crossbow during the archery season had obtained the required crossbow stamp.

Recent and Emerging Issues

Chronic Wasting Disease

On August 25, 2008, the National Veterinary Services Laboratory in Ames, Iowa confirmed Chronic Wasting Disease (CWD) in a captive white-tailed deer from a privately-owned facility in Kent County. A number of responses were taken per the Michigan Surveillance and Response Plan For Chronic Wasting Disease of Free-Ranging and Privately Owned/Captive Cervids (CWD Response Plan) which had been adopted on August 26, 2002. Intensified CWD surveillance was implemented. Regulations required the entire carcass of all hunter-harvested deer from within the CWD Surveillance Zone, either intact or without the deboned meat, to be presented within 72 hours of harvest at the Department deer check station established within the CWD Surveillance Zone. The head with a portion of the neck was required to be submitted for CWD testing. The hunter could retain the antlers. Hunters could not remove the carcass or parts of the carcass from the CWD Surveillance Zone, except for deboned meat, antlers, antlers attached to a skull cap cleaned of all brain and muscle tissue, hides and finished taxidermist mounts. Cooled storage facilities were provided so that hunters could elect to surrender entire carcasses which could be removed after a negative CWD test result was confirmed. All were negative. Since 1998, over 32,000 wild white-tailed deer, greater than 1,400 wild elk, and 59 moose have been tested for CWD statewide, and all have been negative.

The use of bait to aid in deer hunting was banned throughout the LP. Baiting had previously been regulated in various forms since 1998. A ban had remained in place for 6 seasons in 7 northeast Michigan counties that have been the focus of bovine tuberculosis eradication efforts. The CWD Response Plan commits to a baiting ban throughout the duration of intensified CWD surveillance. Although Wildlife Division has no intent to suggest the ban should be modified if no additional animals test positive for CWD through the 2010 season, any changes after that point would not be counter to the CWD Response Plan. It is likely that intense public debate and discussion will occur on this topic.

Antler Point Restrictions for Northeastern Lower Peninsula

Hunters in Deer Management Unit (DMU) 487 – the six-county portion of the Northeastern Lower Peninsula where bovine tuberculosis is an issue with the deer herd – will need to abide by restrictions approved by the Natural Resources Commission (NRC) at its July 8 meeting in Lansing. The change affects how the regular tag on the combination license can be used in the area and limits hunters with archery or firearms licenses to one buck per year. As another option for taking antlerless deer within DMU 487, hunters in the unit may use a firearm or combination license for antlerless deer within the Nov. 15-30 firearm season or the Dec. 10-19 muzzleloader season. This change was enacted by the NRC at its May meeting. Department of Natural Resources and Environment (DNRE) wildlife officials had recommended an antler point restriction for all bucks taken in DMU 487 to work in conjunction with the prior adoption of the tagging option for antlerless deer as a means of encouraging hunters to take more does. Despite liberal antlerless regulations, only about half of all hunters within the area typically purchase one or more antlerless licenses, and harvest continues to focus on young bucks, which does not aid in population control. The DNRE pursued these changes in

DMU 487 due to concerns that the prevalence of bovine tuberculosis infection among deer in northeast Michigan has remained at around 2%, largely unchanged for the past five or more years.

Rather than implement a universal antler point restriction in the area, the NRC enacted the different options for firearm and combination licenses, which are the same as those that have been in effect in the Upper Peninsula for the last two seasons. The ability to take an antlerless deer with a firearm or combination license applies to DMU 487 only. Those who opt to purchase the two-tag combination license will be subject to antler point restrictions on any buck taken within DMU 487. Regulations require that a buck taken with the regular tag on the combination license must sport a minimum of three points on one antler. The restricted tag must be used for a buck with a minimum of four points on one side, as is the case when hunting anywhere in the state. Hunters that purchase a firearms and/or archery license are not subject to any antler point restrictions in DMU 487. However, in this case they may legally take only one antlered buck from the area.

Expanded Crossbow Hunting Opportunities

New crossbow regulations were approved by the NRC for the 2009 hunting seasons. The intent was to expand hunting opportunities, retain existing hunters and recruit new hunters, and offer a way for some hunters to continue hunting when facing physical limitations. The regulations were initially established with a three year sunset in place. Under the regulations, crossbows could be used in the 2009 hunting seasons:

- by anyone 50 years of age or older during the Oct. 1 Nov. 14 bow hunting deer season statewide
- by any hunter age 12 and older during any hunting season in Zone 3 of southern Michigan, including the bow hunting season
- during any season in which a firearm may be used, for both big and small game statewide

A free crossbow stamp must be obtained by those using crossbows in addition to a regular hunting license. The stamp aids in monitoring and surveying crossbow hunters. The 2009 deer harvest survey was able to generate estimates of participation and harvest by hunters using crossbows through this new opportunity (as noted above).

Recent NRC actions have further expanded crossbow hunting opportunities for the 2010 season and onward. The most recent changes include the following:

- Lowering the minimum age for crossbow use from 12 to 10 years of age statewide
- Expanding the use of crossbows to all legal hunters during all archery and firearm seasons statewide, except in the Upper Peninsula, where crossbow use will remain prohibited during the late archery and muzzleloader seasons (unless the hunter is disabled)
- Eliminating a provision that limited crossbows to a maximum bolt velocity of 350 feet per second
- Eliminating the sunset provision, so that all crossbow regulations are permanent unless future action is taken

Evaluation of Deer Management Cooperatives

We are initiating a collaborative research project in conjunction with Michigan State University to evaluate the impacts of deer management cooperatives on the changing landscape of deer hunting and management in Michigan. It is increasingly common for deer hunters that own or control hunting access to private land to form private land deer management cooperatives through which personal relationships are strengthened, goals are shared, and coordination of deer harvest, monitoring, and habitat management efforts

occurs. From an academic perspective, studying this growing phenomenon in southern Michigan will address a growing interest in research examining how voluntary collective action by resource users contributes to addressing persistent conservation challenges. From a practical perspective, findings of this study could ideally be applied to facilitate the formation of cooperatives most likely to advance biologically sound deer management practices while enhancing hunter satisfaction and contributing to overall stewardship of Michigan's natural resources (or discouraging formation of cooperatives unlikely to do so).

We are currently recruiting participation of deer management cooperatives in an area stretching from several counties north of the Lansing area southward to the state line. Efforts will be made to enlist a sufficient number and diversity of operations to allow a comprehensive analysis within a logistically feasible area. Participating cooperative members will be asked to cooperate with data collection regarding hunting, harvest, and habitat management activities and with surveys to assess operations of the cooperatives and their perceptions of their experiences.

Table 1. Number of Michigan deer licenses purchased and harvest tags issued, 2007-2009.

Licenses or Harvest Tags	Number Purchased or Issued 2007	2008	2009	Change Between 2008 and 2009 (%)
Firearm Licenses				
Resident	231,339	249,345	237,282	-4.8
Non-resident	12,335	13,299	13,170	-1.0
Senior	32,733	35,243	35,568	0.9
Military	833	822	1,015	23.5
Subtotal	277,240	298,709	287,035	-3.9
Archery Licenses				
Resident	38,832	35,564	39,246	10.4
Non-resident	2,895	2,579	2,869	11.2
Junior	4,583	4,098	3,807	-7.1
Senior	3,443	3,379	4,578	35.5
Military	226	208	266	27.9
Subtotal	49,979	45,828	50,766	10.8
Combination Licenses[a]				
Resident	303,547	285,698	287,564	0.7
Non-resident	1,886	1,889	1,861	-1.5
Junior	51,290	49,092	48,247	-1.7
Senior	36,358	36,043	39,037	8.3
Military	1,129	1,484	1,669	12.5
Subtotal	394,210	374,206	378,378	1.1
Antlerless Licenses				
Resident	409,584	487,987	489,302	0.3
Non-resident	3,013	3,204	2,584	-19.4
Junior	4,678	5,799	4,554	-21.5
Military	851	1,408	2,181	54.9
Deer Management Assistance	9,512	12,213	10,679	-12.6
Managed Deer Hunt	974	604	245	-59.4
Subtotal	428,612	511,215	509,545	-0.3
Total Licenses Sold	1,150,041	1,229,958	1,225,724	-0.3
Harvest Tags Issued				
Firearm	277,240	298,709	287,035	-3.9
Archery	49,979	45,828	50,766	10.8
Combination	788,420	748,412	756,756	1.1
Antlerless	428,612	511,215	509,545	-0.3
Total Harvest Tags	1,544,251	1,604,164	1,604,102	0.0

[a]Combination licenses included two harvest tags. Other license types had one harvest tag.

Table 2. Number of deer harvested in Michigan, 2007-2009.

Season or permit	Type of deer	2007	2008	2009	Change from 2008 to 2009 (%)
Season					
Archery	Antlerless	52,666	46,423	53,053	14.3*
	Antlered bucks	73,531	60,016	64,580	7.6
	Sexes combined	126,197	106,439	117,633	10.5*
Regular firearm	Antlerless	101,413	122,160	101,234	-17.1*
	Antlered bucks	171,410	169,665	132,822	-21.7*
	Sexes combined	272,823	291,825	234,056	-19.8*
Muzzleloader	Antlerless	32,094	31,049	30,595	-1.5
	Antlered bucks	15,080	13,085	12,252	-6.4
	Sexes combined	47,174	44,134	42,847	-2.9
Early antlerless	Antlerless	NA	12,871	11,545	-10.3
Late antlerless	Antlerless	19,503	16,453	21,325	29.6*
Youth	Antlerless	3,490	3,007	2,993	-0.5
	Antlered bucks	7,408	5,584	5,283	-5.4
	Sexes combined	10,898	8,590	8,275	-3.7
Disabled hunts	Antlerless	NA	142	171	20.4
	Antlered bucks	NA	184	184	-0.2
	Sexes combined	NA	326	354	8.8
Special permits[a]	Antlerless	7,389	9,468	8,195	-13.4
Grand Total	Antlerless	216,555	241,573	229,111	-5.2
	Antlered bucks	267,429	248,350	214,937	-13.5*
	Sexes combined	483,984	489,922	444,047	-9.4*

[a]Includes deer harvested with DMA permits. These permits could be used during any deer hunting season.
*P<0.005.

Minnesota Deer Status Report

2010 Midwest Deer & Wild Turkey Study Group – Devils Lake, ND

Brian Haroldson

Season Framework

Firearm: Hunters must select between 2 season options: (1) The statewide firearm season begins on the Saturday nearest 6 November and runs for 16 days in forested regions with abundant public land [100-level deer management units (DMUs) in northeast Minnesota], and 9 days in agricultural regions dominated by private land [200/300-level DMUs in southern and western Minnesota]; (2) The 9-day, late-season in southeast Minnesota (300 level DMUs) begins 2 weeks after the statewide opener. In agricultural regions, hunters are restricted to shotguns with a single slug, whereas rifles and shotguns are authorized in forested areas. Muzzleloaders, handguns, and crossbows are allowed statewide during either season. Annually, 1 of 3 harvest strategies (lottery, managed, intensive) are implemented within each DMU (*n*=128), based upon estimated deer density in relation to population goal. In general, deer populations are below goal in lottery DMUs, exceed goal by <20% in managed DMUs, and exceed goal by >20% in intensive DMUs. Bag limits are 1, 2, and 5 deer in each DMU category, respectively. A regular firearm license ($27 resident, $141 non-resident) is valid for bucks-only or deer of either sex, depending upon the DMU harvest strategy. In lottery DMUs, hunters interested in pursuing antlerless deer are required to apply for either-sex permits (available at no charge) through a lottery drawing. Unsuccessful applicants in the drawing are restricted to legal bucks (≥3 inch antler) only. Firearm hunters who hunt in managed or intensive DMUs may tag a deer of either sex using their regular license. In addition, hunters in managed DMUs may purchase 1 bonus permit ($14 resident, $69.50 non-resident) to take a second, antlerless-only deer. Hunters in intensive DMUs may purchase up to 4 bonus permits and tag up to 4 additional antlerless deer. Bonus permits are issued over-the-counter. Youth hunters (ages 12-17; $14 resident or non-resident) may take a deer of either sex, statewide, without a permit. In select lottery DMUs where deer populations are not increasing, a reduced number of either-sex permits are offered to youth hunters only. All others are restricted to hunting bucks. Conversely, in intensive DMUs where deer populations have not decreased following several years of intensive harvest, a 2-day October antlerless season is offered. To participate, hunters must purchase an early-season antlerless permit ($8.50 resident, $34.75 non-resident) and a firearm or muzzleloader license. Bag limit is 2 deer, which does not count against the statewide bag limit. The bovine TB DMU in northwest Minnesota is open to hunting during the archery, early-antlerless, statewide firearm, and muzzleloader seasons. Hunters must possess a valid license for the appropriate season/weapon. In addition, an unlimited number of disease management antlerless permits ($2.50) are available. Bag limit is 1 buck plus unlimited antlerless deer.

Muzzleloader: The 16-day muzzleloader season begins the Saturday after Thanksgiving. Hunters ($27 resident, $141 non-resident, $14 youth) may take 1 deer of either sex in managed or intensive DMUs, and may purchase bonus permits for taking additional antlerless deer in these areas. In lottery DMUs, hunters interested in pursuing antlerless deer are required to apply for antlerless permits through a lottery drawing. Unsuccessful applicants in the drawing are restricted to legal bucks (≥3 inch antler) only. Smooth-bored and rifled muzzleloaders must be at least .45 caliber and .40 caliber, respectively. Scopes and breech-loading weapons are not legal during this season. There are no restrictions on ignition systems, bullet types, etc.

Archery: The statewide archery season runs from the Saturday nearest 16 September through 31 December. Archers ($27 resident, $141 non-resident, $14 youth) may take 1 deer of either sex, statewide. In managed and intensive DMUs, archers may purchase bonus permits for taking additional

antlerless deer. Archers may continue to hunt and take deer of either sex during the firearm and muzzleloader seasons. Crossbows are not allowed, except by permit for disabled hunters.

General: For all deer seasons, resident youth hunters (ages 10-11) under direct supervision of a licensed parent or guardian may hunt without a firearm safety certificate, but must obtain a free license prior to hunting. Shooting hours for all seasons are 30 minutes before sunrise to 30 minutes after sunset. Registration is mandatory within 24 hours of season closure. Most registration stations are private businesses that provide the service for free or a small fee. Cross-tagging is allowed, whereby members of the same hunting party may tag deer taken by other party members (excluding youth hunters) who are in the field and hunting together at the same time. Use of bait is prohibited. Regardless of area or season hunted, only 1 legal buck is allowed per calendar year

Population Trends

Although moderate to severe winters during 2 of the last 3 years have decreased deer numbers in the northeast, many DMUs remain above goal. Despite high deer kill by hunters during recent years, deer numbers also remain above goal in many DMUs along the agricultural/forest transition line in northwest, north-central, east-central and southeast Minnesota. Populations are declining, however, in DMUs where early antlerless seasons have been implemented for multiple years. In contrast, in the intensively cultivated areas in southwest and west-central Minnesota, deer populations are generally stable to increasing, although many DMUs remain below goal. The statewide pre-fawn population estimate (*n*=754,000 deer) was stable between 2009 and 2010. Population goals were revised during 2005-06 in all DMUs using a round-table approach of citizen teams. In west-central and southwest Minnesota, teams recommended increasing deer population by 25-50%. Population goals in forested and mixed forest/agriculture DMUs generally decreased 10-25% or remained stable.

2009 Season Summary

In 2009, hunters registered 194,178 deer, down 12% from 2008, and the lowest registered deer kill since 1999 (Table 1). Firearm, muzzleloader, and archery kill decreased 13%, 17% and 9%, respectively. The reduction in harvest was expected because deer numbers have been reduced to goal levels in many DMUs and fewer either-sex permits were available to hunters in 2009. Although firearm antlerless harvest declined 21% from 2008, antlered harvest declined only 2%. Antlerless deer comprised 49% of the firearm harvest, dipping below 50% for the first time since 2002. Firearm and muzzleloader license sales decreased 10% and 4%, respectively, while archery license sales were stable (Table 1). During 2009, DMUs were partitioned into 61 lottery areas (including 11 areas where antlerless harvest was restricted to youth-only hunters), 36 managed areas, and 28 intensive areas (including 20 intensive DMUs with an early antlerless season). A complete harvest breakdown by weapon type is presented in Table 1.

2010 Season Outlook

Based upon the winter severity index (WSI; measured by the number of days with ambient temperatures of <0°F and days with ≥15 inches of snow cover), the winter of 2009-10 was generally mild throughout most of northern Minnesota, with only 2 stations in the moderate range. As a result, deer numbers remained stable or increased slightly (1-10%), with much of the forest zone above density goals. Management strategy will be lottery or managed. Deer numbers remain above goal in many DMUs along the agricultural/forest transition line. Management strategy will continue as either managed or intensive, with an early antlerless season offered in 10 DMUs. Throughout much of west-central and southwest Minnesota, winter severity was considered moderate due to lengthy snow cover. Deer populations remain below goal throughout many agricultural DMUs. Most of these units will be designated as lottery during 2010. However, in 6 units, only youth hunters will be eligible for antlerless

permits. Other hunters (firearm, muzzleloader, archery, disabled) will be restricted to bucks-only hunting. Statewide, the pre-hunt deer population is estimated at 1.1 million, with no change from last year. For 2010, DMUs will be partitioned into 6 youth-only lottery units, 57 lottery units, 45 managed units, and 20 intensive units (including 10 intensive DMUs with early antlerless hunts).

2010 Regulation Changes

Telephone/Internet Deer Registration: In addition to traditional, walk-in registration stations, hunters will now be able to register their deer by telephone or internet. For the telephone system, hunters will call a toll-free number and answer questions using key punch or voice response (e.g. Press or say 1). Internet registration questions will be identical. At walk-in registration stations, hunters are given a possession tag to attach to the carcass. For telephone/internet registration, hunters receive a confirmation number to be written on the license. In select DMUs (TB zone, antlerpoint restriction areas), hunters cannot use telephone/internet registration and must present their deer at walk-in registration stations.

Zone 3 Antler Point Restrictions: Beginning in 2010, antler point restrictions will be implemented within all 300-level DMUs (338-349) in southeast Minnesota during all seasons. Under this rule, bucks must have at least one 4-point antler to be legally harvested. Youth hunters (10-17 years old) are exempt from this regulation and can legally take any antlered buck. In addition, cross-tagging for bucks is banned (i.e., hunters cannot shoot and tag bucks for each other), although cross-tagging for antlerless deer remains legal. This restriction is expected to protect about 75% of the yearling bucks, but increase antlerless harvest. This regulation will be in effect for 3 years and then re-assessed to determine hunter support and whether population objectives are being met.

Youth-Only Lottery DMUs: To further restrict antlerless harvest in lottery DMUs, 6 youth-only lottery units have been established for the 2010 deer hunting season. In these units, youth hunters under age 18 may apply for a limited number of either-sex permits valid during the firearm season through a lottery drawing. All adult hunters (firearm, muzzleloader, archery) and disabled permit holders are restricted to legal bucks only. Youth hunters who do not apply or are unsuccessful in the drawing are also restricted to legal bucks.

Youth Season: A 4-day, either-sex deer season is open for youth hunters 10-15 years old in 15 DMUs in the northwest and 12 DMUs in the southeast. All youth hunters must be accompanied by a non-hunting adult mentor. Bag limit is 1 deer. Participants in the youth season can also participate in the regular firearm/muzzleloader/archery seasons. Previously, a 2-day, antlerless-only, youth (12-14 years) season was offered in 5 northwestern counties.

Early Antlerless Season: The 2-day October antlerless season for firearm hunters has been modified to include 10 intensive DMUs (formerly 20). This reduction was in response to changes in deer populations. To participate, hunters must purchase an early-season antlerless permit and a firearm or muzzleloader license. Bag limit is 2 deer. Last year, approximately 13,000 licensed hunters registered 2,900 deer in 20 DMUs.

Landowner License Consolidation: The firearm, muzzleloader, and archery landowner licenses have been consolidated into a single license type, which is valid during any open season. Bag limit is 1 antlerless deer and the landowner must adhere to the appropriate weapon type for the respective seasons (e.g., landowner cannot use a rifle during the archery season).

Firearm/Muzzleloader Either-Sex Permits: Beginning in 2010, hunters can apply for an either-sex permit (available at no charge) during both the firearm and muzzleloader seasons. Previously, hunters could

only apply during 1 season. The bag limit in lottery areas remains 1 deer. So even if a hunter receives an either-sex permit for both seasons, they may tag only 1 deer. As always, unsuccessful applicants in the drawing are restricted to legal bucks only.

DMU Boundary Changes: Boundaries were changed in 21 DMUs in central and northeastern Minnesota to better reflect ownership, habitat, and associated deer density. As a result, 1 additional DMU was created.

Research Activities

Alternative Harvest Strategies: In Minnesota, white-tailed deer populations exceed management goals in many DMUs. A conventional approach of increasing the bag limit within the established hunting season framework has failed to reduce deer densities. Alternative harvest strategies that emphasize harvesting antlerless deer during the hunting season may increase both the number and proportion of adult females in the overall harvest. We are currently testing the effectiveness of antler point restrictions, earn-a-buck regulations, and early antlerless seasons to increase the harvest of antlerless deer and reduce overall population levels. Beginning in 2005, antler point restrictions and earn-a-buck regulations were implemented in 3 and 4 state parks, respectively. A 2-day October antlerless season for firearm hunters is offered in select intensive DMUs in northwest, east-central, and southeast Minnesota. Plans are to implement test regulations for 5 years. In addition, we are measuring hunter and landowner attitudes towards these and other non-traditional regulations. The primary benefit of the study is to determine how hunters and hunting can be used to manage overabundant deer at local and broad landscape levels.

Distance Sampling: We are currently investigating the use of distance sampling during roadside spotlight surveys to estimate deer density in agricultural DMUs. Our intent is to provide alternative field techniques for estimating deer population size when, and where, aerial surveys are inappropriate. During spring 2010, surveys were completed in 6 DMUs.

Aerial Deer Surveys: We are currently utilizing quadrate-based aerial deer surveys to estimate deer density in select DMUs. Survey purpose is to evaluate the impact of non-traditional harvest regulations (early-antlerless season, antler restrictions, earn-a-buck restrictions) on deer population levels and to recalibrate population models. During 2010, surveys were completed in 7 DMUs.

Current Deer Management Issues

Bovine-Tuberculosis: Since July 2005, bovine tuberculosis (TB) has been confirmed in 12 beef cattle herds in northwest Minnesota. To date, all infected herds have been depopulated and the Board of Animal Health (BAH) has continued to test cattle herds in the area. The TB strain is consistent with bovine TB found in cattle in the southwestern U.S. and Mexico. In fall 2008, Minnesota was granted a Split-State Status for bovine TB that resulted in a lessening of testing requirements for cattle in the majority of the state ("Modified Accredited Advanced" status level), with a small area in the northwest remaining more restrictive ("Modified Accredited" status). Also in 2008, the Minnesota Legislature allocated funds to buy out cattle herds located in the 600-mi^2 Bovine TB Management Zone (~15 mi radius around infected cattle farms), spending $3 million to remove 6,200 cattle from 46 farms. This buy-out resulted in the discovery of the 12th infected herd. The remaining cattle farms (*n*=27) in the Bovine TB Management Zone were required to erect deer-exclusion fencing to protect stored forage and winter feeding areas, costing an additional $690,000 in state funds. MDNR has conducted surveillance for the disease in hunter-killed deer within the Bovine TB Management Zone each fall since 2005. In 2007, MDNR created a special Bovine TB DMU that encompasses the 164-mi^2 Core Area (~2 mi radius around infected deer/cattle farms) of the TB Management Zone, and has used special hunts, permits, and extended seasons to allow hunters to help manage the disease in deer. MDNR also conducted

targeted removal operations in the Core Area using ground sharpshooters (winters 2007-2010) and aerial sharpshooters (winters 2007-2008). In 2008, a 934-mi^2 Landowner/Tenant Shooting Zone was established to allow landowners and tenants to take deer without license or permit, provided deer are submitted for testing. Further, a recreational feeding ban, covering 4,000-mi^2 in northwest Minnesota, was instituted in November 2006 to help reduce the risk of deer to deer transmission of the disease. Baiting deer has been illegal in Minnesota since 1991. To date, 27 of 8,144 deer (5,316 from hunters; 2,613 from sharpshooters; 215 from landowners) sampled in the TB Management Zone have tested positive for the disease. All infected deer were born during or before 2006 and nearly all (*n*=26) infected deer were taken within the Core Area. The 27th TB+ deer was located 2 miles west of the original Core boundary. Prevalence of the disease is decreasing, remains low (<0.2%), and is confined to a small geographic area. MDNR will continue to conduct hunter-killed surveillance for the next 5 years to monitor infection in the local deer population and consider continuation of sharpshooting deer in key locations to address concerns of deer becoming a potential disease reservoir.

Chronic Wasting Disease: MDNR sampled 2,685 hunter-killed deer for CWD during the 2009 deer season. Surveillance was restricted to southeast MN in response to a CWD-positive captive elk facility in Olmsted County (subsequently depopulated) and the continued risk of disease spread from CWD-infected wild deer from Wisconsin. In addition, samples were submitted from 28 deer through targeted surveillance, which included sick animals, escaped captive cervids, and roadkills. All samples were negative for CWD. Surveillance efforts within a 15-mile radius of the Olmstead County elk farm will be repeated during the 2010 deer season.

Table 1. Statewide deer license sales, harvest, and success rates in Minnesota, 1997-2009.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	% Change (2008-09)
FIREARM														
Resident License	369,190	378,320	395,745	400,814	401,005	368,587	340,919	311,128	301,905	302,537	299,943	381,362	377,085	-1
Non-Resident License	7,830	8,852	9,970	10,595	10,972	10,823	11,334	12,004	12,527	13,212	12,552	11,883	11,777	-1
Mgmt/Intensive Harvest Permit	32,229	20,884	23,785	34,802	59,013	105,419	194,201	183,347	177,764	159,468	146,120	190,165	140,926	-26
Multi-Zone Buck License	42,803	44,739	43,903	42,669	41,921	35,701	33,094	32,783	27,678	16,098	15,180	--	--	
Youth License (no tag)	3,844	3,445	2,038	3,215	4,011	2,748	--	--	--	--	--	--	--	
Youth License	--	--	--	--	--	--	34,463	51,331	50,506	49,581	49,196	51,358	56,699	10
All Season Buck License	--	--	--	2,384	3,986	--	--	--	--	--	--	--	--	
All Season Deer License	--	--	--	--	--	21,888	30,998	46,345	60,301	77,476	76,398	--	--	
Early Antlerless Season Permit	--	--	--	--	--	--	--	--	6,810	7,715	28,246	30,974	12,757	-59
Disease Management Permit	--	--	--	--	--	--	--	--	--	--	2,193	1,499	1,354	-10
Free Landowner License	--	--	--	1,671	2,604	3,462	3,956	3,961	3,959	3,953	3,973	3,918	3,351	-14
Total License Sales[a]	455,896	456,240	475,441	496,150	523,512	548,628	648,965	640,899	641,450	630,040	633,801	671,159	603,949	-10
Either-sex Permits Offered	150,195	140,280	177,380	232,595	284,210	363,765	31,625	30,760	28,830	19,125	18,830	32,325	60,800	88
Either-sex Permits Issued	105,481	108,016	135,852	180,490	196,603	192,907	25,386	24,111	23,552	16,764	15,454	27,396	57,631	110
Either-sex Permit Applications	142,260	151,148	214,597	237,571	225,341	202,086	30,253	28,454	26,694	21,680	32,777	47,682	90,882	91
Adult Male Harvest	65,156	82,928	92,584	102,861	98,645	100,083	110,440	105,994	95,612	95,715	97,573	85,674	83,837	-2
Antlerless Harvest	62,407	60,492	71,681	88,492	98,095	100,038	148,857	124,530	121,247	136,035	126,370	103,722	81,647	-21
Total Harvest[2]	127,563	143,420	164,265	191,353	196,740	200,121	259,297	230,524	216,859	231,750	223,943	189,396	165,484	-13
Success Rate (%)[a,b]	28.0	31.4	34.6	38.6	37.6	36.5	40.0	36.0	33.8	36.8	35.3	28.2	27.4	-3
ARCHERY														
Resident License	63,499	63,826	66,226	68,918	69,573	57,372	55,608	50,974	50,709	50,052	53,577	88,923	89,084	0
Non-Resident License	980	1,029	1,073	1,271	1,288	1,261	1,428	1,144	1,206	1,284	1,509	1,614	1,614	0
Mgmt/Intensive Harvest Permit	17,478	15,846	16,945	20,393	22,141	17,742	0	0	0	0	0	0	0	
Youth License	--	--	--	--	--	--	3,731	7,261	7,491	7,672	7,643	9,006	9,161	2
Free Landowner License	--	--	--	29	35	62	83	92	104	116	152	147	134	-9
Total License Sales[c]	81,957	80,701	84,244	90,611	93,037	76,437	60,850	59,471	59,510	59,124	62,881	99,690	99,993	0
Total Harvest[d]	13,247	12,450	13,579	16,251	16,300	16,192	20,870	20,754	23,812	25,375	24,167	22,689	20,646	-9
Success Rate (%)[c,d]	16.2	15.4	16.1	17.9	17.5	21.2	34.3	34.9	40.0	42.9	38.4	22.8	20.6	-9
MUZZLELOADER														
Total License Sales[c]	9,503	9,765	11,411	11,972	13,043	11,764	10,044	10,122	9,567	9,293	11,365	66,447	63,915	-4
Total Harvest[5]	3,183	3,183	2,972	4,548	4,780	5,737	9,254	9,326	15,065	13,653	12,324	9,738	8,048	-17
Success Rate (%)[c,e]	33.5	32.6	26.0	38.0	36.6	48.8	92.1	92.1	157.5	146.9	108.4	14.7	12.6	-14
TOTAL HARVEST	143,993	159,053	180,816	212,152	217,820	222,050	289,421	260,604	255,736	270,778	260,434	221,823	194,178	-12

[a] Includes firearm, archery, and muzzleloader license sales from the All Season Deer License.
[b] Includes firearm harvest data from the All Season Deer License.
[c] Excludes firearm, archery, and muzzleloader license sales from the All Season Deer License.
[d] Includes archery harvest data from the All Season Deer License.
[e] Includes muzzleloader harvest data from the All Season Deer License.

Midwest Deer and Turkey Study Group Meeting
Missouri 2009-2010 Report

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2009 DEER SEASON

All harvested deer were telechecked in 2009. Successful hunters called a toll-free number to report their deer. We used an automated voice recognition system where the caller responded verbally to a series of questions about the deer taken (permit number, deer type, county where taken, and number of points if a buck). The system automatically recorded time and date. Conservation agents had almost immediate access to information on deer checked and took advantage of this to make cases (purchased permit after taking deer, antler point violations etc.).

Firearms deer season included the following portions:

1. For 9 counties, a 4-day urban portion October 9-12, antlerless deer only;
2. A 2-day youth-only portion October 31-November 1;
3. An 11-day main firearms portion November 14-24;
4. A 9-day December muzzleloading firearms portion December 19-29;
5. For 73 counties, a November 25-December 6 antlerless-only portion.
6. A 2-day late youth-only portion January 2-3.

Archery season included two segments:

1. September 15-November 13;
2. November 25-January 15.

Managed deer hunts – Overall, 1,842 deer were taken on 89 managed hunts in 2009.

Permits sold:

Total	Resident	Nonresident
749,470	712,253	37,217

Harvest:

Total	Antlered bucks	Antlerless
296,797	107,150	189,647

Age of antlered bucks - % yearlings:
Antler restriction counties: 23%
Other counties: 58%

Percent antlerless kill: 64%

Hunter numbers:

Total	Firearms	Archers
506,578	487,604	177,471

Minimum age to hunt deer: None for archery; 6 for firearms

Permit fees: All archery and firearms resident antlerless permits are $7; nonresidents $25.

Resident firearm	Resident archery	Nonresident archery	Nonresident firearm
$17	$19	$225	$225

Deer Population Status - Based on deer-vehicle accidents, harvests, population modeling results, and hunter observation reports, rural deer populations are generally stable, although there were some parts of Missouri, especially northern and central portions, where deer numbers seem to be down. Urban deer continue to be an increasing problem.

Deer harvest liberalizations in recent years have resulted in higher doe harvests and stable buck harvests in Missouri. Unfortunately, these harvests are not evenly distributed across the landscape. Although successful at increasing doe harvests, the liberalizations have created more deer "cold" spots and have not solved many of the "hot" spots. These results are reflected in hunter attitude surveys. Surveys from 1991, 2001, 2003-2009 indicate that about the same number of hunters felt there were “too many” deer but those stating there were “about the right number” are decreasing and stating there are “too few” are increasing.

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Urban sprawl is a major contributor to the deer “overabundance” problem; however, other factors are involved. A 2008 production landowner survey indicated that 22% of landowners did not allow deer hunting. Also, a low but increasing proportion of landowners lease property for deer hunting (0.4% in 1981, 2.6% in 2005) and more land is being purchased for hunting (10% of production landowners primary use of land is hunting/fishing). The goal of most landowners/lessees who are primarily interested in deer hunting is to have high deer numbers; harvest may be low on some of these properties as a result. Hunter access and education will be key issues in managing deer in the future.

CWD Testing – We completed random sampling of all counties in 2004 (21,732 tested, no positives). We conducted targeted surveillance of sick deer in 2005 and 2006. In 2007 we implemented modified targeted sampling by recruiting taxidermists to collect samples from adult bucks. We divided Missouri into 3 sections with the northern section sampled in 2007. Approximately 1,230 samples were taken; none were positive. In 2008 and 2009 taxidermists in central and southern Missouri collected 1,195 and 1,700 samples, respectively with no positives. In 2010 we will begin the cycle over, sampling in northern Missouri.

CWD in captive white-tailed deer – In late February, the Missouri Department of Agriculture reported a CWD positive deer in a fenced private hunting ranch in Linn County (north central Missouri). We immediately put together a plan to sample 150 deer within a 5-mile radius around the pen. We collected and tested 153 free-ranging deer with no positives. An additional 50 white-tailed deer and red deer were shot and tested from within the pen that had the positive deer with none of those being positive. This fall hunters who take a deer within a 25-mile radius around the pen are being asked to voluntarily submit their deer for CWD testing. These samples will be collected at meat processors within this zone.

Depopulation of the shooting pen is still pending; the owner has not thus far agreed to a USDA indemnity offer.

Antler Point Restriction - An experimental rule requiring antlered deer to have a minimum of 4 points on at least one side (APR) was implemented in 29 counties in 2004. The rule applied to the archery season and all portions of the firearms season but the youth portion. Primary objectives were to shift harvest from bucks to does and to improve hunter and landowner satisfaction with deer management in Missouri. The APR was to be maintained for 3-5 years and then evaluated. The 2007 season was the fourth and last year of the experiment.

Because deer densities and harvest regulations differed in northern and central Missouri, a different response to the APR could occur. Therefore, we analyzed data from the north (north pilot) and central (central pilot) counties with APRs separately. The APR reduced harvest of antlered deer in both the north and central pilot (ranged from 35% in 2004 to 14% in 2007 in the north pilot counties and from 37% to 19% in the central pilot counties. The reduction consisted mostly of yearling bucks (mean reduction = 69%) because the majority of this age class (69%) did not qualify as legal deer under the APR. Harvest of adult bucks was slightly lower in 2004, but increased in all of the following years. The change in adult buck harvest that could be attributed to the APR was 16% and 32% in the north and central pilots, respectively.

Total harvest reduction in the north APR counties ranged from 14% in 2004 to 8% in 2007 and in the central APR counties from 3% to no change. If the APR is continued, the reduction of total harvest as a result of the restriction would probably level out at 5-10% in the north pilot counties and no effect in central pilot counties. There was a small negative effect of the APR on doe harvest in the north pilot. In contrast, doe harvest in the central pilot increased an average of 13% over the 4-year study period.

The APR was popular with hunters, produced more bucks in older age classes, and in some counties resulted in increased doe harvest. As a result, the APR was expanded to include 65 counties in 2008; an additional county was added in 2009. We continue to monitor the effect of the antler restriction but because of the expansion no longer have control counties. Preliminary results indicate similar trends in age structure of bucks in the harvest and total doe harvest to what we saw in the original experiment.

Trail camera census - We are evaluating the impact of deer hunting regulations on selected conservation areas. This involves most importantly deer censuses and measures of hunter use and satisfaction. The problem is that the only method currently available to census deer accurately is by helicopter over snow. Unfortunately, lack of snow in Missouri limits the opportunities for these censuses. Developing alternative census methods would greatly facilitate our ability to evaluate deer regulations on conservation areas. The use of trail cameras to census and determine other characteristics of deer populations on the study areas presents such a potential alternative that would not be dependent on snow cover.

Objectives:

1. Determine the most efficient protocol for collecting deer demographic information on conservation areas using trail cameras;
2. Measure costs and effort associated with the use of trail cameras to collect deer demographic information on conservation areas;
3. Determine the type of information (census, population structure, mortality) that can be collected with the use of trail cameras on conservation areas.
4. Compare census estimates obtained with trail cameras to those obtained with a helicopter over snow.

We assessed the use of trail cameras to measure deer demographics on three conservation areas. We used a density of one digital camera per 160 acres and photographed deer from 8/20– 8/30 at baited sites.

Cameras were orientated in a north or south direction to avoid the sun's glare. Each camera was checked after 5 days and then picked up on the 10th day. Photographs were uploaded to a laptop computer and placed in a descriptive file with time and location data. We attempted to identify individual bucks by antler and facial characteristics. Identifiable deer were considered marked and we used a mark/recapture program to obtain a population estimate.

This methodology is being further tested. Last winter we marked 64 deer with radio transmitters on a 2,252-acre study area. Estimates from a mark and recapture study using trail cameras will be compared to estimates derived from the technique developed for public land.

Reproductive study – The last reproductive study conducted in Missouri was in the early 1990's. In that study we found that fawn reproductive rates had declined from those in earlier studies. We will repeat that study from 2010-2013. We will request that MDC field staff collect reproductive data (fetal counts, fetal crown-rump length, female age, etc.) from any road-killed female deer they encounter from February through May.

We will determine if sampling period (1978-1986, 1989-1993, 2011-2013), collection year, region of the state, and age affect pregnancy rates and fetal counts. Parameter estimates of the number of fetuses per pregnant female will be generated using an analysis of variance. Parameter estimates for the proportion of pregnant females will be estimated using logistic regression. We have identified a set of a-priori models that will be compared using AIC.

Youth recruitment – We continue to have a youth portion of the firearms season. For 2008 it was expanded and now includes two days in early November and two days in early January. Resident and nonresident youth permit prices are discounted. We have considerable interest in these opportunities with over 50,000 participants annually.

Hunter recruitment initiatives – We now have an apprentice program which allows hunters age 16 and older who are not hunter-education certified to hunt deer and turkey. To do this they must first purchase an Apprentice Hunter Authorization permit ($10) which can be obtained for a maximum of two years. They can then buy a firearm deer or turkey permit. However, they must hunt in the presence of a properly licensed hunter 21 years old or older who is hunter-education certified. This is intended to allow older persons to try hunting deer or turkey to see if they like it before fulfilling the hunter education requirements.

Share the Harvest program – This is our deer donation program administered by MDC and the Conservation Federation of Missouri. A hunter can donate a whole deer with part (usually about ½ but in some counties all) of the processing cost paid by the Conservation Federation (through donated dollars – MDC contribution, $160,000) with supplementation from local donors. In 2008 there were 4,540 hunters donating 213,000 pounds of venison. In some counties where a local MDC employee pushes the program and there is no cost to the hunter, it probably has some impact on antlerless harvest. In a deer hunter mail survey we asked if they would shoot more deer if they could donate the meat free of charge. Of the respondents, 45% said they would take more deer, suggesting that the Share the Harvest program could potentially increase antlerless harvest.

Urban deer solutions – We still struggle with urban deer issues. In one community (Town and Country) where we have conducted several studies, lethal control has not been considered an option with the public until recently. White Buffalo, Inc. was contracted to sterilize 100 does and sharp shoot 100 deer during the winter 2009. White Buffalo began work in December, sterilizing 100 does in 12 days and sharp shooting 112 deer (39 males and 83 females) in 10 days. The process went smoothly with a total cost was around $150,000. Future efforts are yet to be decided but there is some public resistance to the costs of the sterilization.

Private lands program – Due to the limitations of county level regulations there are deer hot spots where too few deer are being harvested and cold spots where deer are overexploited. Additionally, with increasing leasing and purchasing of land for hunting and potential future decreases in the number of hunters, there is a concern that doe harvest will decline and so will our ability to manage deer numbers. In order to remain proactive and flexible as the deer management landscape changes we are proposing to develop a private lands deer management program with the ultimate goal of managing deer populations on a much smaller scale than is currently possible with county level regulations. We are teaming with University of Missouri Extension Service, local QDMA branches, and Whitetails Unlimited to develop a series of deer management workshops along with education and outreach "How To" guides and materials for landowners and hunters, and promoting the formation of wildlife management cooperatives.

This initiative is also intended to complement other management programs and use deer management as a conduit to reach landowners that are not currently participating in habitat management programs focused on improving habitats for quail and other species. The belief is that we are missing many big landowner/cooperators by not marketing to those who are enthusiastic about deer and deer management and not interested in quail management. Since private land deer management currently is not a high priority we are missing opportunities to promote habitat management strategies that benefit all wildlife, not just deer.

Season/Portion	Antlered Deer			Button Bucks			Does			Total		
	2008	*2009*	*% Diff.*	*2008*	*2009*	*% Diff.*	*2008*	*2009*	*% Diff.*	*2008*	*2009*	*% Diff.*
Archery	16,060	16,576	3	5,308	6,384	20	21,434	26,050	22	42,802	49,010	15
Urban	3	10	NA	118	285	142	556	1,162	109	677	1,457	115
Early Youth	6,442	7,111	10	1,295	1,773	37	2,802	4,574	63	10,539	13,458	28
November	73,868	79,346	7	28,630	26,926	-6	96,224	85,064	-12	198,722	191,336	-4
Muzzleloader	2,704	3,278	21	1,526	2,531	66	6,050	10,106	67	10,280	15,915	55
Antlerless - Only	34	138	NA	2,816	4,581	63	12,387	17,353	40	15,237	22,072	45
Managed Hunts	489	371	-24	328	368	12	1,247	1,103	-12	2,064	1,842	-12
Late Youth	357	320	-10	316	306	-3	1,125	1,081	-4	1,798	1,707	-5
Total Firearms	83,408	90,203	8	34,701	36,402	5	119,144	119,340	0	237,253	245,945	4
Total	**99,957**	**107,150**	**7**	**40,337**	**43,154**	**7**	**141,825**	**146,493**	**3**	**282,119**	**296,797**	**5**

Permit Type	Number of Permits			Number of Deer Harvested		
	2008	*2009*	*% Diff.*	*2008*	*2009*	*% Diff.*
Youth Deer and Turkey Hunting	39,033	13,872	-64	11,342	3,884	-66
Permittee Archery	100,448	107,282	7	20,090	22,048	10
Landowner Archery	78,586	79,892	2	5,877	6,757	15
Permittee Archery Antlerless	40,015	45,534	14	11,808	14,248	21
Landowner Archery Antlerless	119,683	123,565	3	4,733	5,756	22
Permittee Firearms	314,145	337,768	8	73,695	85,868	17
Landowner Firearms	173,701	172,753	-1	35,851	38,867	8
Permittee Firearms Antlerless	244,083	245,014	0	84,914	85,728	1
Landowner Firearms Antlerless	152,491	151,839	0	31,203	31,305	0
Resident Firearms	887,984	893,196	1	223,836	235,119	5
Nonresident Firearms	35,469	28,050	-21	13,169	10,533	-20
Resident Archery	328,026	347,106	6	39,403	45,732	16
Nonresident Archery	10,706	9,167	-14	3,105	3,077	-1
Permittee Archery & Firearms	724,656	749,470	3	201,849	211,776	5
Landowner Arch & Firearms	524,461	528,049	1	77,664	82,685	6

Deer Permit and Harvest Facts

	Archery	Firearms[1]	Total[1, 2]
Resident permittees[2]	99,840	333,776	433,616
Nonresident permittees[2]	7,442	17,864	25,306
Landowners[2]	79,892	172,753	252,645
Total individuals[3]	177,471	487,604	506,578
Age distribution of hunters			
<=10	1,347	18,867	-
11-15	9,110	46,454	-
16-40	80,491	186,438	-
41 -55	55,376	235,845	-
Antlerless permit sales			
1	23,178	146,112	169,290
2	6,539	29,165	35,704
3	1,434	6,744	8,178
4+	1,027	4,354	5,381
Number of deer taken			
0	141,454	300,562	302,025
1	27,235	143,612	145,458
2	6,332	33,540	40,659
3	1,593	6,937	11,459
4+	857	2,953	6,776
Number of antlered deer taken			
0	161,505	397,865	405,290
1	15,390	89,399	96,200
2	572	338	4,857
3	4	2	231
Percentage taking:			
At least 1 deer	20.3	39.4	40.4
1 deer	15.3	29.5	28.7
2 deer	3.6	6.9	8.0
3+ deer	1.4	2.0	3.6
Percentage taking:			
1 antlered buck	8.7	18.4	19.0
2 antlered bucks	0.3	0	1.0
3+ antlered bucks	0	0	0
Percentage of deer taken by nonresidents	6.3	4.3	4.6
Percentage of deer taken by landowners	25.6	29.0	27.8

[1]Includes Youth Deer and Turkey Hunting Permits
[2]Number of any-deer permits issued
[3]Number of individuals, including nonresidents, possessing a permit, not number of permits issued

NEBRASKA STATUS REPORT

MIDWEST DEER AND WILD TURKEY GROUP

Camp Grafton, Devils Lake, North Dakota
August 22-25, 2010

Submitted by the State of Nebraska
Nebraska Game and Parks Commission - Wildlife Division
Research, Analysis and Inventory Section
Big Game Program Manager: Kit Hams

Collection and Analysis of Deer Harvest Data - 2009

Project Objective: To gather information related to the status, distribution, and abundance of wildlife populations in Nebraska, and to develop effective management practices and programs for these species.

2009 Deer Harvest

Job A2: Collection and Analysis of Deer Harvest Data (K. Hams)

Objectives: To estimate hunting success, the distribution of kill, and the sex and age composition of the deer harvest.

Activity: Establish check stations during deer season to check, seal and record biological data on all harvested deer. Successful hunters are required to check harvested deer at one of approximately 120 designated check stations distributed statewide where these data are gathered. Check stations are staffed primarily by private businesses with NGPC staff and other trained professionals running check stations during peak periods, e.g. first and last weekend of the firearm season. In 2009, approximately 100 Commission personnel aged 14,700 deer and collected tissue samples from 2,983 deer for chronic wasting disease (CWD) testing (see Job P1). Data are compiled and summarized by February 1 so they are available for creating well-informed season recommendations for the following year.

TELECHECK was initiated in 2009. Hunters who harvested deer outside the November firearm deer season were allowed to check deer by telephone or internet. 12,535 deer were checked (8469 by Internet and 4066 by telephone). Cost savings to the agency was $5,640 and savings to hunters was estimated at $188,000 in reduced transportation costs.

Significant Deviations: None

Results: The 2009 deer season allowed 123 days of hunting from September 15 – January 15. Archery season was September 15 - December 31; muzzleloader season was December 1-31; firearm season was November 14-22; January antlerless season was January 1-15; October Antlerless season was October 9-11.

Total deer permit sales to 96,000 deer hunters increased to 132,338 permits, which is a 1% increase and the highest number of permits ever issued. Total deer harvest was 76,613, a 5% decrease of the previous year, but still the 2nd highest on record.

Total mule deer harvest was 11,354. Mule deer harvest has ranged from 9,155 to 11,787 for the past 25years. Mule deer buck harvest was the 2nd highest on record (8,928). Mule deer antlerless harvest was the 2nd lowest in 25 years (2,428), reflecting NGPC goals to increase mule deer populations.

Whitetail buck harvest was the 2nd highest on record (34,768) and whitetail antlerless was also the 2nd highest on record (29,711).

Most hunters are highly selective of adult bucks so 91,000 bonus “free” antlerless whitetail tags were issued to increase antlerless harvest. However, record snowfall, cold weather, delayed crop harvest and low interest in the October Antlerless seasons resulted in an antlerless whitetail harvest that was 7,000 below the objective.

November Firearm Season - *Results of the November firearm season (Table 1) are shown for the 18 firearm deer management units (Figure 1). Harvest by SCA permit holders is not included in the November total although approximately 40% of SCA harvest occurs in November. Total harvest during November firearm season for the past five years is shown in Table 2.*

Table 1. November firearm season, permits, harvest, and success, 2009.

Units		Permits Issued	Bag Limits	Adult Buck Harvest		Antlerless Harvest		Total Kill	% Success	% Age 1 Bucks	
				MD	WT	MD	WT		ALL	MD	WT
Blue NW	b	2600	1ES,1AO		1149	2	835	2023	78%		36%
Blue SE	b	3900	1ES,1AO	3	1592	3	891	2521	65%		37%
Buffalo		2000	ES/ES[3]	386	610	35	120	1169	58%	23%	31%
BuffaloWT		1495	1ESWT		608	3	103	717	48%		26%
Calamus E	*	1300	1ES[3]	57	611	0	89	757	58%		37%
Calamus W		1800	1ES	375	652	74	101	1213	67%	21%	22%
Elkhorn	b	3600	1ES,1AO	3	1703	4	1089	2808	78%		47%
Frenchman	*	1600	1ES[3]	841	429	7	58	1341	67%	28%	35%
Frenchman WT		1276	1ESWT	6	498	1	121	632	50%		27%
Keya Paha	*	2300	1ES[3]	278	1129	5	112	1542	67%	21%	20%
Loup East	*	2400	1ES[3]	61	1034	5	253	1358	57%		41%
Loup West		1700	1ES	399	556	94	76	1173	69%	24%	30%
Missouri	*	3200	1ES[3]	100	1592	2	240	1940	61%	41%	27%
Pine Ridge		3000	1ES	656	771	124	194	1757	59%	17%	16%
Plains		1500	1ES	607	257	112	28	1010	67%	22%	18%
Platte	*	1600	1ES[3]	535	439	9	56	1051	66%	33%	32%
Platte WT		907	1ESWT	11	335	3	83	434	48%		42%
Republican	*	500	1ES[3]	21	223	0	55	299	60%		35%
Repub. WT		2495	1ESWT	6	1171	0	244	1421	57%		25%
Sandhills		2400	1ES	910	680	81	59	1740	73%	10%	12%
Upper Platte		1200	1ES	415	181	99	37	734	61%	26%	36%
Wahoo	b	4500	1ES,1AO	2	2089	1	1329	3465	77%		39%
Statewide Buck		7629	Buck	495	2842	6	35	3396	45%	11%	22%
Youth	b	7230	1ES,1aowt	857	2510	158	1876	5472	76%	33%	39%
Landowner	b	12215	1ES,1AO	885	3946	337	2071	7313	60%	21%	29%
TOTALS		74347	--	7909	27607	1165	10155	47286	64%	21%	29%

* Antlerless mule deer prohibited

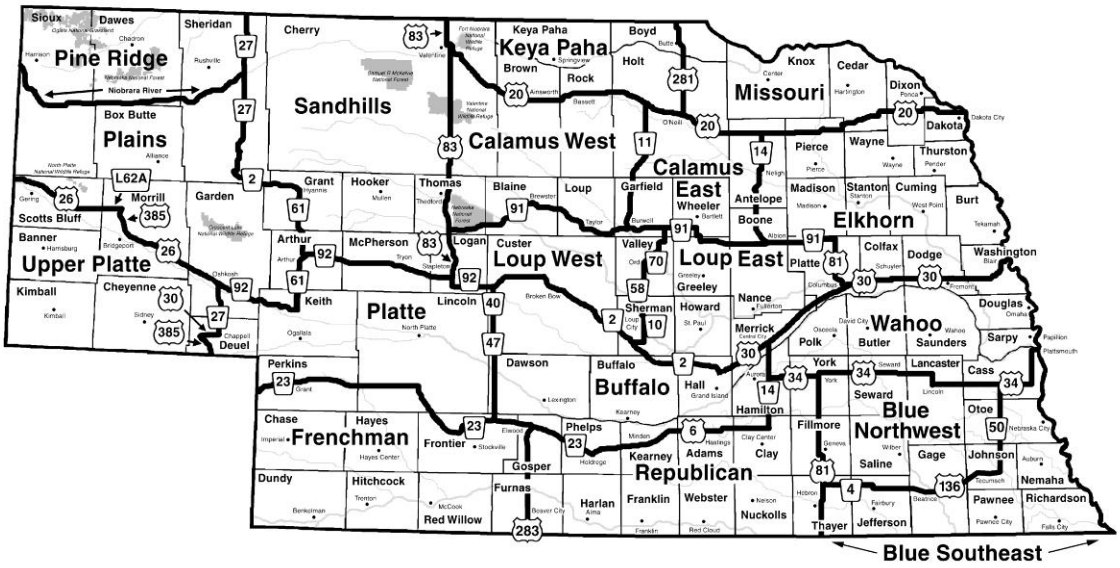
b Bonus antlerless tag included with each permit

Table 2. November firearm deer season, 2005-2009.

Year	November Firearm Season		
	Permits	Harvest*	% Success
2005	67,673	38,899	57
2006	70,498	43,081	61
2007	73,169	42,710	58
2008	75,940	50,733	67**
2009	74,347	47,286	64**

* includes unknown species.
** bonus tags inflate success

Figure 1. 2009 Firearm Deer Management Units



Archery Season – *A total of 7,612 deer was taken on 17,265 permits for a 44% success rate. 73% of the antlerless kill is due to the addition of bonus antlerless whitetail tags on all permits. Permit sales increased 6% and harvest increased 2% from the 2008 season. 56% of the harvest was adult bucks and 95% of the harvest was whitetail deer. Results for the past five years are in Table 3.*

Table 3. Harvest and success for archery seasons 2005-2009.

Year	Permits	Adult Male		Antlerless		Total Harvest*	Percent Success	% Antlerless
		MD	WT	MD	WT			
2005	14,633	104	3,282	46	843	4,283	29	21%
2006	15,606	174	3,634	35	750	4,596	29	17%
2007	16,067	172	3,783	49	808	4,858	30	18%
2008	16,350	187	4,165	50	3,008	7,440	46	41%
2009	17,265	252	4,028	55	3,220	7,612	44	44%

*includes unknown species.

Muzzleloader Season – *A total of 5,929 deer was taken on 14,490 permits, for a success rate of 41%. About half of the antlerless kill occurs due to the addition of bonus antlerless whitetail tags on all permits. Permit sales decreased 5% and harvest decreased 15%, primarily due to record cold and snow depth in December. Results of the muzzleloader season for the past five years are in Table 4. 45% of the harvest was adult bucks and 83% of the harvest was whitetail deer.*

Table 4. Harvest and success for muzzleloader season 2005-2009.

Year	Permits	Adult Male		Antlerless		Total Harvest*	Percent Success	% Antlerless
		MD	WT	MD	WT			
2005	16,119	474	2,200	351	1,696	4,769	30	43%
2006	16,293	559	1,923	336	1,335	4,164	26	40%
2007	16,077	653	2,210	431	1,632	4,953	31	42%
2008	15,199	690	2,266	420	3,555	6,946	46	60%
2009	14,490	680	2,005	291	2,911	5,929	41	54%

* includes unknown species.

Statewide Youth Season – *This was the sixth year for statewide youth permits. The minimum age for deer hunting was reduced from 12 to age 10 in 2008. Participation by youth hunters increased 5% in 2009. Bonus antlerless whitetail tags were included on all permits. 7,230 permits were issued and 5,472 deer were harvested. Success was 76%. 62% of the harvest was adult bucks, and 80% of the harvest was whitetail. Harvest details can be found in Table 1 and Table 5.*

The objective of this permit was to provide youth and mentors with many options to create a quality youth deer hunting experience in multiple seasons with the one permit. Based on increased participation and high success by youth hunters, it appears that the objectives were met.

Table 5. Harvest and success for youth deer season, 2005-2009.

Year	Permits	Adult Male		Antlerless		Total Harvest*	Percent Success	% Antlerless
		MD	WT	MD	WT			
2005	4,141	366	1,192	128	443	2,377	57	24%
2006	5,003	495	1,779	140	560	2,977	60	24%
2007	5,092	464	1,814	136	524	2,945	58	22%
2008	6,854	742	2,564	188	2,144	5,654	82	41%
2009	7,230	857	2,510	158	1,876	5,472	76	37%

* includes unknown species

Season Choice Area Antlerless Season – SCA seasons were first used in 2000. Hunters are allowed to take antlerless deer during archery, muzzleloader, November firearm and January late season (123 days). Twenty SCA units were open in 2008 and 2009. Unit boundaries, permit quotas, bag limit and season length are designed to allow maximum hunter opportunity to harvest antlerless deer in areas where herd reduction is desired. A total of 15,009 antlerless deer were harvested in the 20 SCAs on 24,921 permits (Table 6). SCA harvest for the past five years is shown in Table 7.

Table 6. Harvest and success for Season Choice Area antlerless seasons, 2009.

Unit	Permits			Harvest	% Success
	Authorized	Sold	Bag Limit[1]		
SCA1 MID PLATTE AO	2,000	1,216	2aowt	821	68%
SCA2 REPUB S WT AO	2,000	1,744	2aowt	1,393	80%
SCA3 Cal East	400	243	2aowt	162	67%
SCA4 Cal West	300	249	2aowt	169	68%
SCA5 Loup East	800	800	2aowt	577	72%
SCA6 Loup West	300	300	2aowt	187	62%
SCA8 FRENCHMAN WT AO	700	700	2aowt	510	73%
SCA9 W PLATTE WT AO	700	700	2aowt	459	66%
SCA11 Keya Paha	400	346	1ao,1aowt	215	62%
SCA12 Missouri	1,500	1,500	2aowt	987	66%
SCA13 REPUB WT AO	250	250	1aowt	95	38%
SCA17 Pine Ridge	700	700	1ao,1aowt	630	90%
SCA18 MO RIVER N AO	1,600	1,256	2ao	671	53%
SCA19 ELKHORN W AO	1,800	1,800	2ao	802	45%
SCA20 BL/WAHOO W AO	5,600	5,607	2aowt	3,139	56%
SCA21 MO/PT RIVER AO	8,000	5,847	2ao	2,992	51%
SCA22 SHILLS AO	600	563	2ao	599	106%
SCA23 Plains	400	400	2ao	355	89%
SCA24 Upper Platte	300	300	1ao	132	44%
SCA25 Buffalo	400	400	1aowt	114	29%
Total	28,750	24,921		15,009	60%

[1]AO = antlerless deer only, AOWT = antlerless only whitetail deer

Table 7. Season Choice Area antlerless deer harvest, 2005-2009.

	SCA Antlerless Season		
Year	Permits	Harvest	Success
2005	19,385	12,314	63%
2006	20,973	13,081	62%
2007	23,515	15,617	66%
2008	23,405	14,738	63%
2009	24,921	15,009	60%

Special Seasons - Special seasons were established in refuge areas to reduce deer numbers. These were antlerless-only hunts except for DeSoto December muzzleloader which is for bucks on DeSoto Bend National Wildlife Refuge (Table 8).

Table 8. Harvest and Success for Special Seasons, 2009.

Unit	Permits			Harvest	% Success
	Authorized	Sold	% Either Sex[1]		
Boyer Chute October	60	60	2AOWT	38	63*
Boyer Chute December	60	58	2AOWT	27	45*
DeSoto Early	140	140	2AOWT	109	78*
DeSoto December MZ Esex	100	100	1Esex,1AO	46	46*

* Bonus tags elevate success.

[1]AO = antlerless deer only, WT = whitetail deer, Esex = Either sex

Mule Deer and White-tailed Deer Harvest - Mule deer harvest declined 4% to 11,354. Harvest the past 20 years has remained relatively stable, ranging from 9,155 to 11,787. Whitetail harvest has more than doubled during the past 20 years (Table 9).

Table 9. White-tailed and Mule Deer Harvest, All Seasons, 1980-2009.

Year	Total Permits*	All Seasons Harvest		
		Mule Deer	Whitetail	All**
1980	36,184	6,584	11,578	18,252
1985	61,913	10,174	25,250	35,500
1990	70,736	9,920	25,512	35,201
1995	83,739	10,960	34,160	45,180
2000	112,933	10,095	49,714	60,148
2001	123,956	10,544	48,815	59,455
2002	112,894	9,225	44,390	53,624
2003	112,563	9,155	44,132	53,314
2004	114,925	10,321	45,919	56,311
2005	118,369	11,144	49,672	60,816
2006	123,860	11,610	53,322	65,091
2007	128,283	10,931	57,121	68,489
2008	131,392	11,787	68,632	80,467
2009	132,338	11,354	64,479	76,613

* Does not include bonus tags

** Includes unknown species

Age of harvested bucks has shifted to older animals in most units as evidenced in the increasing percentage of age 2 and older (2+) whitetail bucks harvested statewide (71%). Mule deer harvest has also shifted to older bucks statewide (79% 2+ MD bucks in 2009). This trend towards older bucks has been ongoing for 20 years and is indicative of the improving quality of the deer herd (Table 10).

Table 10. Percentage of older white-tail and mule deer bucks in the harvest, 1992-2009.

% Harvested Bucks ≥ 2 Years Old	**White-tail Bucks**					**Mule Deer Bucks**				
	1992	1997	2002	2007	2009	1992	1997	2002	2007	2009
	33	45	52	64	71	36	46	59	76	79

Discussion: 2009 was expected to set harvest records for whitetail, however, a wet fall that delayed harvest was followed by record cold and snow in December in January. The end result was an antlerless whitetail harvest that was 7,000 below objective. Deer hunting opportunity will need to be expanded

and seasons will need to be more aggressive to reach the objective of a 25% reduction in deer numbers in eastern units by 2013. Mule deer herds are at record levels and will be managed to allow further increases in number and quality. The age of harvested bucks is the best we have seen in the past 40 years.

The use of Telecheck which allowed hunter to check deer by phone or internet was successful as more than 12,000 hunters used this means to check their deer. Telecheck will be expanded in 2010 as all deer harvested outside of the November firearm deer seasons are required to go through Telecheck system.

Nonresident permits sales increased 4% to 12,535 which was 513 above last year's record.

Recommendations: Expand the use of Telecheck check stations (telephone and internet).

2010 STATUS REPORT ON DEER MANAGEMENT IN NORTH DAKOTA

by
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North Dakota Game and Fish Department
(August 1, 2010)

2009 Regular Deer-Gun Season Structure - Regulations for the 2009 regular deer-gun season were applied to all 38 hunting units within the state (Figure 1). Deer licenses are initially issued through a lottery except for landowner gratis licenses. In 1993, a weighted priority lottery system was instituted. The priority system is similar to South Dakota's in which unsuccessful applicants have their name entered more times in the drawing the longer they have been unsuccessful. The licenses are issued for specific deer types (antlered or antlerless white-tailed deer, antlered or antlerless mule deer, and antlered or antlerless any deer). The gratis landowner licenses allow any deer to be taken, but are restrictive in that the holders may only hunt on their own land. A total of 140,972 licenses were issued of the 144,400 licenses made available for the 2009 regular deer-gun season (Table 1a). The distribution of these deer licenses was as follows: 15,293 gratis landowners, 119,019 residents, and 6,660 non-resident lottery licenses.

The deer-gun season throughout the state was 16½ days in length (November 6 to 22). The deer gun season started at noon, CST, November 6, 2009 for all units. The daily hunting hours are from one-half hour before sunrise to one-half hour after sunset. In 2009, North Dakota held an early deer season for antlerless license holder in two selected areas of the state where deer numbers are way above goals. The early season was for one week from September 25 to October 1, 2009 in the north east corner of the state and from October 2 to October 9 in the south west corner of the state.

2009 Deer-Gun Season Harvest - Based upon harvest survey questionnaires it is estimated that 91% of the licensees actively attempted to hunt and harvest a deer. This resulted in the harvest of 66,717 white-tailed deer and 8,109 mule deer. The overall success rate for licensees that actually hunted was 59%. A breakdown of the harvest, by species of deer and hunting unit, is provided in Table 2a. Through a questionnaire survey, the early September-October season had 19% of eligible hunter taking advantage of the opportunity and they experienced 46% success.

2009 Muzzleloading Long Gun Season Structure - The muzzleloader season was first mandated by the state legislature for the 1987 season. This season was modified during the 1996-97 state legislature. The change allowed for 2% of the white-tailed deer gun permits to be allocated for muzzleloader season, of which up to one-half may be antlered licenses. In 2009, there were 1,357 antlered and 1,356 antlerless white-tailed deer licenses issued. The season opened at noon, CST, November 27, 2009 and ran from one-half hour before sunrise to one-half hour after sunset each day thereafter through December 13, 2009. Licenses are valid for all of North Dakota. The licenses were issued by lottery. A priority system is in place for the drawing of these licenses. Legal weapons were long guns of .45 caliber or larger, and handguns .50 caliber or larger, loaded through the muzzle, with flint or percussion ignition, firing black powder or black powder substitutes. Smokeless powders are not legal. In-line type percussion locks were legalized in 1994, but telescopic sights remain illegal. No magnification (1x) scopes are legal.

2009 Muzzleloading Long Gun Harvest - All 2,713 muzzleloader licensee's were sent a questionnaire, of which an estimated 2,360 actually hunted during the season (87%). The projected harvest of white-tailed deer was 803 deer (446 antlered and 357 antlerless) for an overall success rate of 34% (Table 3a).

2009Archery Season Structure - Archery deer licenses are issued over the counter through license vendors and county auditors with no restrictions on species or sex. The 2009 archery deer season started

at noon, CTS, September 4, 2009 and continued from one-half hour before sunrise to one-half hour after sunset each day until January 3, 2010. The deer-bow season is open during the entire deer-gun season with the restriction that all bow hunters must wear blaze orange during the deer gun season. Any deer was legal, with no unit restrictions for residents. Nonresidents are restricted in the number of mule deer licenses available to 15% of the previous season's regular-gun mule deer licenses.

2009Archery Harvest - In total, 21,218 archery licenses were sold in 2009. After the season, 4028 questionnaires were sent to resident and nonresident license holders from the 2008 season. Expanding the sample results projected that 19,848 of the hunters who bought a license actually went hunting (93.5%). These deer-bow hunters had an overall success rate of 34.1%, with a total harvest of 6,760 deer (5,890 white-tailed deer and 870 mule deer) (Table 3a).

2009 Youth Deer Gun Season - An experimental youth deer gun season was initiated in 1994. The season is a one time opportunity for youths 14 and 15 years of age at the time of the application deadline. All regular deer gun season regulations and weapon restrictions applied. This includes a half price ($10.00) license for all youths under sixteen. In addition, each youth licensee must be accompanied by at least one unarmed parent, guardian, or adult authorized by their parent or guardian. In 2009, an unlimited number of any white-tailed deer and antlerless mule deer permits were available and a limited number of antlered mule deer permits (i.e., 10% of the total antlered mule deer licenses available, or 345 licenses in 2009. The nine and one-half day season ran from noon, CTS, September 18 and closed September 27, with the option that youth license holders can also hunt during the regular deer-gun season if they are unsuccessful in the youth season. In addition to the regular youth deer season, the 2009 legislature approved a law that allowed individuals whose 12th birthday occurs on or before the opening of deer hunting season but is younger than fourteen years of age is entitled to receive a statewide white-tailed antlerless deer permit but may hunt only in the youth deer hunting season. All regular deer gun season regulations applied to this youth deer gun season and in addition each youth licensee must be accompanied by at least one unarmed parent, guardian, or adult authorized by their parent or guardian.

2009 Youth Deer Gun Season Harvest - After the youth season, questionnaires were sent to all 3510 licensees. An estimated 2,985 teenagers participated in the youth season (85%). They experienced an overall success rate of 51%, with a total harvest of 1,542 deer (1,366 white-tailed deer and 158 mule deer) (Table 3a).

2009 Special Herd Reduction Deer Bow Season - There are four areas in North Dakota open for special herd reduction seasons. These areas include: within the city limits of Bismarck; Fargo; USDA-ARS Research facility in Mandan; and Graham's Island State Park near Devils Lake. These areas each have special regulations to fit their individual needs.

In the city of Bismarck, the chief of police issued antlerless white-tailed deer permits for portions of the city as the need arises. The season ran from August 29, 2008 through January 31, 2009. These special hunt permits are above the allotted number of permits allowed by the state during regular deer-gun season. All the information and paperwork for these hunts are handled by the entity in charge; therefore, it requires a minimum effort by the Game & Fish Department. The harvest from these special hunts has been minimal in recent years, 50-75 animals, but it does help to disperse the deer, and reduce deer depredation conflicts.

2009-2010 Population Trend - White-tailed deer are distributed throughout North Dakota. Population densities vary by region and are influenced by land use patterns, human population densities, habitat types, and climate. In 1958, big game biologists divided the state into 41 subunits with permanent boundaries that most nearly coincide with identified environmental influences. These management subunit's boundaries also coincide with hunting unit boundaries. To provide comparative annual population trend data, permanent aerial winter survey areas have been established within each of the 41 subunits, thus permitting unit specific deer management. Since 1999, population trend data has also been collected on deer sighted per hour of effort by hunters. Additionally, information on deer-vehicle

collisions has been compiled on a county-by-county basis across the state. Regular population indices mentioned above, have been used to monitor white-tailed deer population trends. Population trends and indices for white-tailed deer are summarized in Table 4a. Available data suggests decreasing white-tailed deer numbers after two severe winters across the state.

The main range of mule deer in North Dakota is the region of the state southwest of the Missouri River. The unitized system of management for white-tailed deer is also the basis for mule deer management. The Badlands region is considered the primary mule deer range and permanent deer population study areas have been established since 1954. Population trend and demographic data for mule deer is obtained from aerial survey areas each spring and fall, respectively. Population trend data for mule deer is also obtained from hunter observations. Population index data for mule deer is summarized in Table 5a. Available data suggests decreasing mule deer numbers throughout the badlands and that portion of the state south and west of the Missouri River after two severe winters in the state. Demographic information, based upon hunter observations and aerial surveys, are summarized for white-tailed and mule deer in Tables 6a and 7a, respectively.

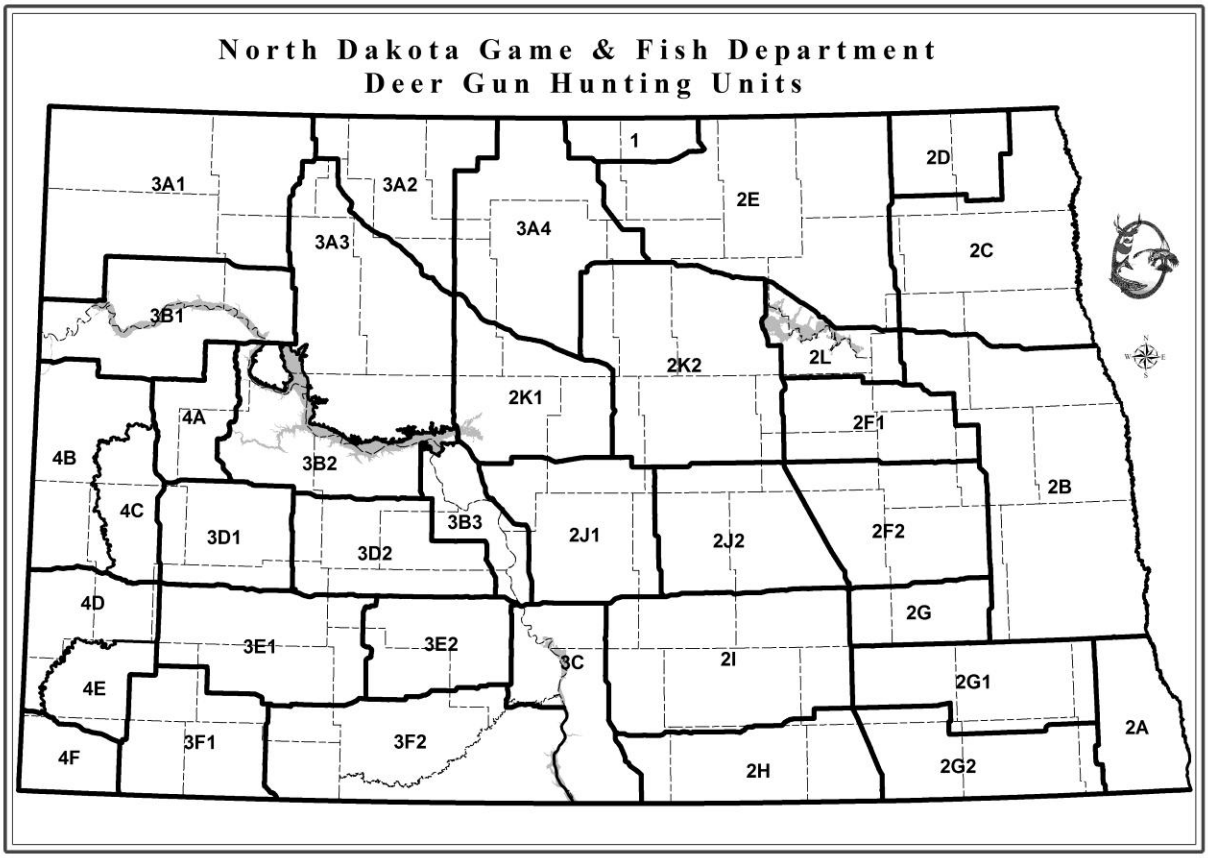


Figure 1. Distribution of deer hunting units in North Dakota.

Appendix A:
Summary of 2009-2010 Mule Deer and White-tailed Deer Harvest, Census, and Demographic Data

1. A total of 142,975 licenses were issued of the 144,400 licenses made available for the regular deer-gun season (Table 1a).

2. The overall hunter success for the 2009 regular gun season was 60.5 percent.

3. Deer-gun hunters harvested an estimated 66,717 white-tailed deer and 8,109 mule deer during the 2009 season (Table 2a).

4. Youth deer hunters in 2009 had a success rate of 51.1 percent during the youth season, and harvested 1366 white-tailed deer and 158 mule deer during the youth deer season (Table 3a). During the regular deer-gun season an additional 122 white-tailed deer, and 102 mule deer harvested by youth hunters.

5. Muzzleloader hunters in 2009 had a success rate of 34.0 percent, and harvested 803 white-tailed deer (Table 3a).

6. Archery hunters in 2009 had a success rate of 34.1 percent, and harvested 5,890 white-tailed deer and 870 mule deer (Table 3a).

7. Population indices for white-tailed deer suggest a stable to decreasing population in a most of the state, with stable to increasing deer numbers in the northwestern and southwestern portion of the state along the South Dakota border (Table 4a) (See Figures 1 and 2).

8. Population indices for mule deer suggest a stable to decreasing population in the badlands and stable to increasing numbers in portions of the Slope and Missouri River Major Management areas (Table 5a) (Figure 3).

9. Based on 2262 useable questionnaires from the 2009 Hunter Observation Survey (n=37,270 white-tailed deer classified), overall white-tailed deer population demographics suggest that about 21 percent of the population were antlered deer prior to, or on the opening weekend of the deer-gun season (Table 6a).

10. Based on fall aerial surveys (n=2,208 mule deer classified), and Hunter Observation Survey results (n=9,789 mule deer classified) for the Badlands Major management Units, overall mule deer population demographics suggest that about 21 percent of the population were antlered deer prior to, or on the opening weekend of the deer-gun season (Table 7a).

11. In 2008 information on the number of elk and moose observed during the opening weekend of the deer was added to the hunter observation questionnaire. Maps summarizing the results of the 2009 data set for elk and moose are given in Figures 4 and 5.

Table 1a. Summary of license numbers available for hunting units by license type for the 2009 regular deer gun season.

MGMT UNIT	HUNTING UNIT	Any Deer Antlered	Any Deer Antlerless	WT Deer Antlered	WT Deer Antlerless	Mule Deer Antlered	Mule Deer Antlerless
TURTLE MTS	I	1,000	1,500				
RED RIVER	2A	500	200				
	2B	4,600	4,600				
	2C	3,500	8,000				
PEMBINA HILLS	2D	1,600	2,500				
SHEYENNE	2F1	2,600	4,000				
	2F2	2,200	4,500				
	2G	1,000	1,000				
	2G1	2,300	2,300				
	2G2	1,650	2,100				
COTEAU	2E	2,600	5,500				
	2H	1,000	2,000				
	2I	1,800	3,000				
	2J1	700	1,500				
	2J2	1,800	3,200				
	2K1	1,000	2,500				
	2K2	3,200	7,200				
	3A1	1,400	1,200				
	3A3	1,200	1,800				
DEVILS LAKE	2L	800	1,500				
SOURIS	3A2	1,300	3,000				
	3A4	2,300	5,200				
MISSOURI	3B1			500	800	500	800
	3B2			200	500	250	300
	3B3	150	200	1,200	2,100		
	3C	100	100	900	1,400		
SLOPE	3D1	300	450	200	300		
	3D2	400	800	400	900		
	3E1	400	1,300	500	1,300		
	3E2	450	1,200	500	1,200		
	3F1	200	600	700	1,200		
	3F2	200	700	650	1,000		
BADLANDS	4A			250	500	450	800
	4B			200	200	650	1,000
	4C			200	200	500	800
	4D			250	250	550	600
	4E			250	300	350	500
	4F			300	450	200	450
	TOTALS	42,250	73,650	7,200	12,600	3,450	5,250

TOTAL LICENSES = 144,400

Table 2a. Summary of 2009 white-tailed deer and mule deer harvest data and buck:doe:fawn ratios, by hunting unit, for all regular deer-gun license holders.

Hunting Unit	White-tailed Deer				Mule Deer			
	Antlered	Antlerless	Total	Ratios (B/D/F)	Antlered	Antlerless	Total	Ratios (B/D/F)
1	399	515	914	1.34/1/0.73				
2A	242	71	313	6.05/1/0.78				
2B	2119	2197	4316	1.35/1/0.40				
2C	1473	3393	4866	0.66/1/0.52				
2D	604	982	1586	0.86/1/0.40				
2F1	1315	2308	3623	0.86/1/0.51				
2F2	1004	2332	3336	0.59/1/0.37				
2G	468	562	1030	1.20/1/0.44				
2G1	1122	1213	2335	1.24/1/0.34				
2G2	814	1152	1966	1.13/1/0.60				
2E	1246	2180	3426	0.80/1/0.40				
2H	594	950	1544	0.87/1/0.39				
2I	1084	1425	2509	1.11/1/0.46				
2J1	390	668	1058	0.77/1/0.32				
2J2	1158	1693	2851	1.06/1/0.55				
2K1	626	1155	1781	0.70/1/0.29				
2K2	2044	3501	5545	0.87/1/0.49				
3A1	1258	489	1258	2.06/1/0.31				
3A3	701	1505	1566	1.20/1/0.48				
2L	428	944	1372	0.74/1/0.63				
3A2	770	1505	2275	0.68/1/0.33				
3A4	1207	2551	3758	0.70/1/0.48				
3B1	350	378	728	1.13/1/0.22	321	398	719	0.95/1/0.18
3B2	146	252	398	0.71/1/0.22	173	164	337	1.18/1/0.12
3B3	692	1118	1810	0.86/1/0.39	53	68	121	1.06/1/0.36
3C	731	782	1513	1.45/1/0.55	71	29	100	4.44/1/0.81
3D1	229	298	497	1.05/1/0.23	177	163	340	1.39/1/0.28
3D2	308	585	893	0.72/1/0.37	241	261	502	1.18/1/0.28
3E1	514	964	1478	0.80/1/0.50	212	289	501	0.85/1/0.16
3E2	499	1013	1512	0.70/1/0.42	204	225	429	1.25/1/0.38
3F1	544	710	1254	1.02/1/0.33	100	141	241	0.83/1/0.17
3F2	512	828	1340	0.94/1/0.52	181	217	398	1.04/1/0.25
4A	182	264	446	0.90/1/0.31	339	438	777	0.99/1/0.28
4B	145	101	246	1.91/1/0.33	484	648	1132	0.94/1/0.26
4C	132	132	264	1.12/1/0.12	374	538	912	0.82/1/0.18
4D	149	142	291	1.77/1/0.69	368	365	733	1.31/1/0.30
4E	182	178	360	1.67/1/0.63	266	250	516	1.28/1/0.20
4F	183	279	459	0.95/1/0.43	144	207	351	0.85/1/0.22
Total	**26008**	**40709**	**66717**	**0.92/1/0.44**	**3538**	**4410**	**8109**	**1.04/1/0.24**

Table 3a. Summary of 2009 September Youth Deer Seasons (N=2985 licenses issued; including new 12-year-old antlerless white-tailed deer only season), muzzleloader (N=2,713 licenses issued), and archery season (N=21,218 licenses issued) harvest data and buck:doe:fawn ratios, by license type for those license holders that hunted.

License Type	White-tailed Deer				Mule Deer			
	Antlered	Antlerless	Total	Ratios (B/D/F)	Antlered	Antlerless	Total	Ratios (B/D/F)
Youth Season	256	1110	1366	0.38/1/0.63 (256/680/430)	143	29	143	5.72/1/0.16 (143/25/4)
Muzzle-Loader	463	340	803	1.95/1/0.43 (463/237/103)				
Archery	4098	1792	5890	3.17/1/0.37 (4119/1292/500)	613	257	881	2.75/1/0.15 (613/223/34)
Total	**4817**	**3242**	**8059**	**2.18/1/0.47 (4817/2209/1033)**	**756**	**286**	**1042**	**3.05/1/0.15 (756/248/38)**

Table 4a. Summary of white-tailed deer population indices for2009-2010 (i.e., 2010 winter aerial survey[Deer/ Sq. Mi.], 2009 deer-vehicle collisions, and 2009 white-tailed deer observed by hunters per hour of effort during the first Saturday and Sunday of the 2009 regular deer season (number of useable surveys).

Hunting Unit	2010 Winter Aerial Survey (Sample Size)	2009 Deer-Vehicle Collisions (MD & WTD)	2009 Hunter Obs. WTD/Hr. ± s.d. (Sample Size)
Turtle Mountains 1	5.4 (502/93.0) Decrease	Stable to Decreasing	0.92 ± 0.930 (39) Decreasing
Red River All Units	8.3 (6475/773.0)	Stable	NA
2A	2.6 (374/141.4) Decrease	Stable to Increasing	1.14 ± 1.513 (44) Stable to Decreasing
2B	12.7 (2927/231.1) Stable	Stable to Increasing	1.05± 0.840 (55) Decrease
2C	7.9 (3174/400.5) Decrease	Stable	1.25 ± 1.180 (68) Decreasing
Pembina Hills 2D	12.9 (3743/289.4) Decrease	Stable	1.12 ± 1.166 (47) Stable to Decreasing
Sheyenne-James River All Units	5.6 (4978/886.1) Decrease	Stable	NA
2F1	5.8 (1251/213.9) Decrease	Stable to Decreasing	2.27 ± 2.147 (58) Stable to Decreasing
2F2	7.0 (1162/164.9) Decrease	Stable	1.51 ± 1.502 (56) Decrease
2G	5.5 (561/101.5) Decrease	Stable	1.00 ± 0.770 (63) Decreasing
2G1	3.3 (726/218.5) Decrease	Stable	1.49 ± 2.182 (61) Stable
2G2	6.8 (1278/187.3) Decrease	Stable	1.73 ± 1.791 (56) Decreasing
Devils Lake 2L	23.5 (402/17.1) Decrease	NA	2.34 ± 1.835 (47) Decreasing
Coteau Hills All Units	2.6 (11981/4646.6) Decrease	Stable to Decreasing	NA
2E	2.4 (2830/1200) Decrease	Stable	1.38 ± 1.683 (47) Increasing
2H	4.7 (985/209.2) Decrease	Stable	1.03 ± 1.062 (54) Decreasing
2I	2.0 (2947/1480) Decrease	Stable	1.06 ± 0.972 (47) Decreasing
2J1	NA	Stable to Decreasing	0.97 ± 0.587 (52) Decreasing
2J2	5.7 (553/97.2) Decrease	Decreasing	1.25 ± 0.858 (61) Decreasing

Table 4a. (Continued)

Hunting Unit	2010 Winter Aerial Survey (Sample Size)	2009 Deer-Vehicle Collisions (MD & WTD)	2009 Hunter Obs. WTD/Hr. ± s.d. (Sample Size)
Coteau Hills 2K1	NA	Stable	1.67 ± 1.377 (58) Decreasing
2K2	3.7 (683/187.0) Decrease	Decreasing	1.98 ± 2.297 (53) Decreasing
3A1	1.9 (2343/1260) Increase	Stable	1.55 ± 1.826 (48) Decreasing
3A3	7.7 (1640/314.4) Stable	Decreasing	1.21 ± 1.265 (67) Decreasing
Souris Des Lacs All Units	8.5 (5661/502.9) Decrease	Stable to Decreasing	NA
3A2	15.7 (1639/104.1) Stable	Increasing	1.63 ± 1.431 (53) Decreasing
3A4	8.3 (2670/398.8) Stable	Decreasing	1.40 ± 1.422 (56) Decreasing
Missouri River All Units	NA	Stable to Increasing	NA
3B1	NA	NA	2.25 ± 4.410 (39) Decreasing
3B2	NA	Stable	NA (Small Sample)
3B3	NA	NA	2.62 ± 7.126 (59) Decreasing
3C	NA	Increasing	1.32 ± 1.260 (49) Decreasing
Slope All Units	2.8 (9828/3525) Decrease	Stable to Decreasing	NA
3D1	2.5 (1025/574) Decrease	Decreasing	NA (Small Sample)
3D2	1.0 (559/577) Decrease	Stable	1.18 ±1.021 (48) Decreasing
3E1	2.5 (1440/588) Decrease	Decreasing	2.24 ± 1.916 (49) Decreasing
3E2	2.7 (1534/570) Decrease	Stable to Decreasing	1.99 ± 1.432 (56) Decreasing
3F1	4.7 (2652/560) Stable	Stable	5.87±6.622 (42) Decreasing
3F2	3.8 (2618/656) Stable	Stable	3.82±3.272 (56) Decreasing

Table 4a. (Continued)

Hunting Unit	2010 Winter Aerial Survey (Sample Size)	2009 Deer-Vehicle Collisions (MD & WTD)	2009 Hunter Obs. Deer/Hr. ± s.d. (Sample Size)
Badlands All Units	NA	Stable to Increasing	NA
4A	8.8 WT & 3.5 MD (815 WT & 282 MD/92.1) Decrease	NA	0.94 ± 1.127 (39) Decreasing (Mule Deer Hunter Observations)
4B	NA	Decreasing	0.68 ± 0.681 (25) Decreasing (Mule Deer Hunter Observations)
4C	NA	Decreasing	0.55 ± 0.609 (24)*** Stable (Mule Deer Hunter Observations)
4D	NA	NA	0.95 ± 1.074 (19) Stable to Decreasing (Mule Deer Hunter Observations)
4E	NA	Increasing	1.69 ± 3.428 (24)*** Stable to Decreasing (Mule Deer Hunter Observations)
4F	NA	Decreasing	3.257 ± 3.194 (29)*** Decreasing (ALL Deer Hunter Observations)

***** Small Sample**

Table 5a. Summary of mule deer population indices for 2009-2010 (i.e., 2010 winter/spring aerial survey, 2009 Deer-vehicle collisions, and 2009 mule deer observed by hunters per hour of effort during the first Saturday and Sunday of the 2008 regular deer season(number of useable surveys).

Hunting Unit	2010 Winter(*) or Spring Aerial Survey (Sample Size)	2009 Deer-Vehicle Collisions (MD & WTD)	2009 Hunter Obs. MD/Hr. ± s.d. (Sample Size)
Missouri River All Units	NA	Stable to Increasing	NA
3B1	NA	NA	1.84 ± 1.635 (23) Stable to Decreasing All Hunters
3B2	NA	Stable	NA (Small Sample)
3B3	NA	NA	0.65 ± 0.929 (12) Stable to Increase ALL Hunters
3C	NA	Increasing	1.28 ± 1.287 (22) Stable to Increase All Hunters
Slope All Units	1.4 (4800/3532)	Stable to Decreasing	NA
3D1	0.9 (522/574)	Decreasing	NA (Small Sample)
3D2	1.2 (683/577)	Stable	1.48+1.524 (31)*** Decreasing
3E1	0.3 (203/586)	Decreasing	1.51 + 1.441 (32) Decreasing All Hunters
3E2	0.8 (477/570)	Stable to Decreasing	1.20 ± 1.057 (40) Stable to Decrease All Hunters
3F1	0.9 (499/551)	Stable	3.15+4.540 (33) Stable All Hunters
3F2	0.9 (598/683)	Stable	2.39+2.136 (46) Decreasing All Hunters

Table 5a. (Continued)

Hunting Unit	2010 Spring Aerial Survey (Sample Size)	2009 Deer-Vehicle Collisions (MD & WTD)	2009 Hunter Obs. MD/Hr. ± s.d. (Sample Size)
Badlands All Units	7.8 (2272) Decreasing	Stable to Increasing	NA
4A	9.2 (254) Decreasing	NA	2.31 ± 1.953 (49) Decreasing MD Hunters
4B	8.7 (472) Decreasing	Stable to Decreasing	2.96 ± 2.275 (51) Decreasing All Hunters
4C	10.1 (257) Increasing	Decreasing	2.87 ± 1.619 (43) Decreasing All Hunters
4D	8.8 (751) Decreasing to Stable	NA	2.58 ± 2.089 (33) Decreasing All Hunters
4E	6.3 (358) Increasing to Stable	Stable to Increasing	3.54 ± 4.969 (37) Decrease All Hunters
4F	3.9 (152) Decreasing	Stable to Decreasing	1.72 ± 1.053 (6)*** Decreasing All Hunters

***** Small Sample**

Table 6a. Summary of white-tailed deer buck:doe:fawn ratios based upon observations by white-tailed deer hunters during the first Saturday and Sunday of the 2009 regular deer season.

Hunting Unit	2009 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Turtle Mountains 1	0.38:1:0.70 (62-165-116)
Red River All Units	0.38:1:0.43 (482-1282-556)
2A	0.39:1:0.50 (135-343-172)
2B	0.33:1:0.40 (141-427-172)
2C	0.40:1:0.41 (206-512-212)
Pembina Hills 2D	0.38:1:0.49 (143-375-182)
Sheyenne-James River All Units	0.38:1:0.45 (1122-2967-1325)
2F1	0.39:1:0.51 (328-838-431)
2F2	0.35:1:0.38 (232-650-244)
2G	0.40:1:0.42 (187-462-194)
2G1	0.36:1:0.40 (194-537-216)
2G2	0.38:1:0.50 (181-480-240)
Devils Lake 2L	0.42:1:0.57 (270-630-357)
Coteau Hills All Units	0.47:1:0.45 (1915-4056-1838)
2E	0.41:1:0.61 (178-427-261)
2H	0.48:1:0.30 (196-407-122)
2I	0.41:1:0.33 (149-362-118)
2J1	0.52:1:0.26 (180-345-89)
2J2	0.53:1:0.56 (248-470-261)
2J1 & 2J2	0.53:1:0.43 (428-815-350)

Table 6a (Continued).

Hunting Unit	2009 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Coteau Hills 2K1	0.59:1:0.45 (306-518-231)
2K2	0.50:1:0.53 (302-607-323)
2K1 & 2K2	0.54:1:0.49 (608-1125-554)
3A1	0.33:1:0.56 (155-474-266)
3A3	0.45:1:0.37 (201-446-167)
Souris Des Lacs All Units	0.36:1:0.55 (393-1079-593)
3A2	0.33:1:0.53 (193-588-314)
3A4	0.41:1:0.57 (200-491-279)
Missouri River All Units	0.45:1:0.45 (699-1540-694)
3B1	0.33:1:0.53 (136-408-217)
3B2	0.40:1:1.00 (4-10-10)***
3B3	0.53:1:0.42 (371-702-297)
3C	0.45:1:0.40 (188-420-170)
Slope All Units	0.38:1:0.42 (1832-4782-1990)
3D1	NA
3D2	0.55:1:0.32 (166-297-96)
3E1	0.43:1:0.39 (277-648-253)
3E2	0.44:1:0.48 (353-801-384)
3F1	0.34:1:0.38 (508-1510-573)
3F2	0.35:1:0.45 (528-1526-684)

Table 6a. (Continued).

Hunting Unit	2009 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Badlands All Units (All Hunters)	0.39:1:0.47 (904-2299-1082)
4A (All Hunters)	0.30:1:0.38 (101-334-127)***
4B (All Hunters)	0.38:1:0.44 (85-221-98)***
4C (All Hunters)	0.72:1:0.58 (141-197-115) ***
4D (All Hunters)	0.30:1:0.39 (111-372-145)
4E (All Hunters)	0.47:1:0.56 (198-423-237)
4F (All Hunters)	0.36:1:0.48 (268-752-360)
Statewide (All Hunter Observations)	**0.38:1:0.42 (7822-20715-8733)**

***** Small Sample**

Table 7a. Summary of mule deer buck:doe:fawn ratios based upon fall 2009 aerial survey and observations by hunters during the first Saturday and Sunday of the 2009 regular deer season.

Hunting Unit	Fall 2009 Aerial Survey Buck:Doe:Fawn (Sample Size)	2009 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Missouri River All Units	NA	0.28:1:0.34 (148-538-181) (All Hunters)
3B1	NA	0.26:1:0.47 (63-243-114)***
3B2	NA	0.00:1:0.00 (0-1-0)***
3B3	NA	0.24:1:0.44 (15-62-27)***
3C	NA	0.30:1:0.17 (70-232-40)***
Slope All Units	NA	0.33:1:0.41 (747-2293-933) (All Hunters)
3D1	NA	NA (No Sample)
3D2	NA	0.36:1:0.37 (103-287-105)
3E1	NA	0.34:1:0.46 (115-336-155)
3E2	NA	0.36:1:0.32 (125-350-112)
3F1	NA	0.27:1:0.34 (153-565-192)
3F2	NA	0.33:1:0.49 (251-755-369)

***** Small Sample**

Table 7a. (Continued).

Hunting Unit	Fall 2009 Aerial Survey Buck:Doe:Fawn (Sample Size)	2009 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Badlands All Units	0.41:1:0.89 (464-922-822)	0.38:1:0.45 (2050-5329-2410)
4A	0.47:1:1.03 (51-109-112)	0.37:1:0.50 (287-771-382)
4B	0.62:1:0.91 (79-128-117)	0.38:1:0.42 (490-1302-544)
4C	0.62:1:0.93 (79-127-118)	0.49:1:0.55 (558-1137-630)
4D	0.46:1:0.72 (138-300-215)	0.34:1:0.32 (290-858-273)
4E	0.43:1:1.10 (73-163-179)	0.32:1:0.47 (457-1762-883)
4F	0.46:1:0.85 (44-95-81)	0.40:1:0.41 (110-275-114)
Statewide	NA	**0.36:1:0.43 (2945-8160-3524) (All Hunters)**

***** Small Sample**

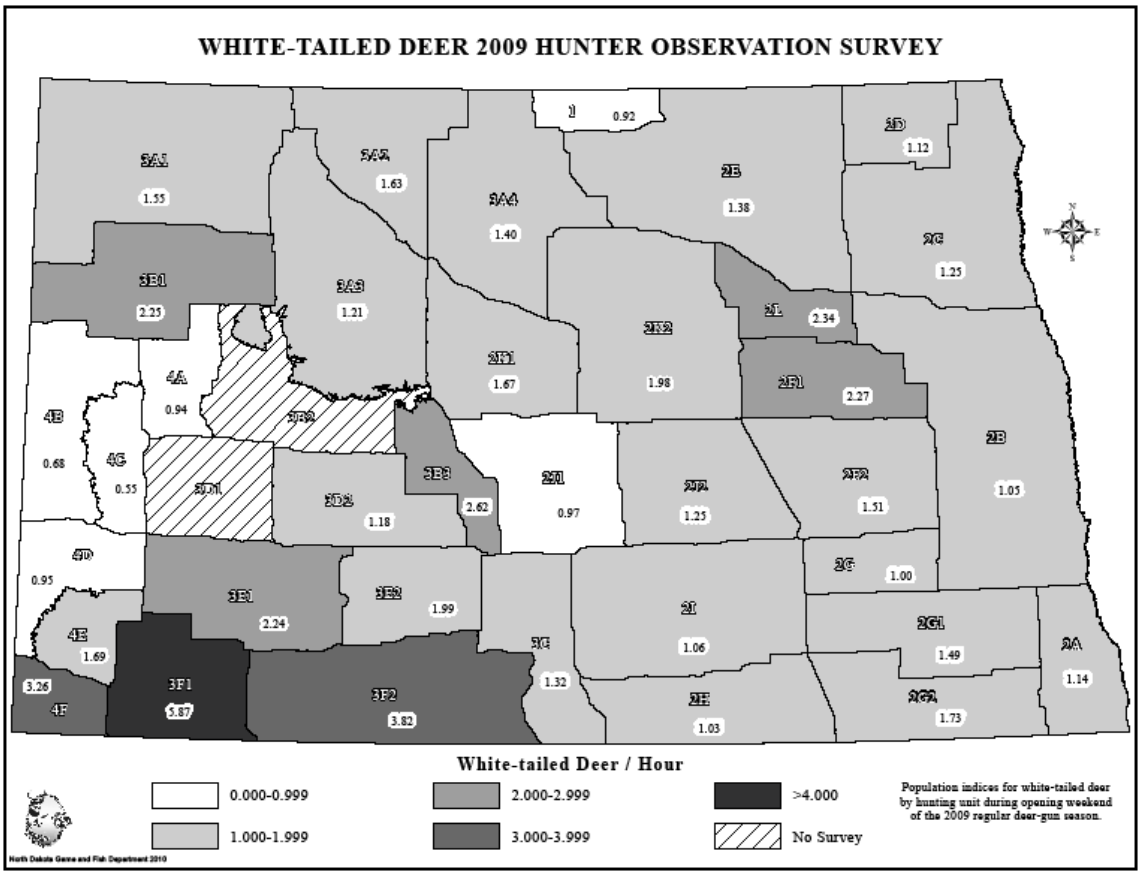


Figure 1. Map of North Dakota illustrating the use of observation rates by hunters (white-tailed deer sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2009 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for white-tailed deer population trends since 2004.

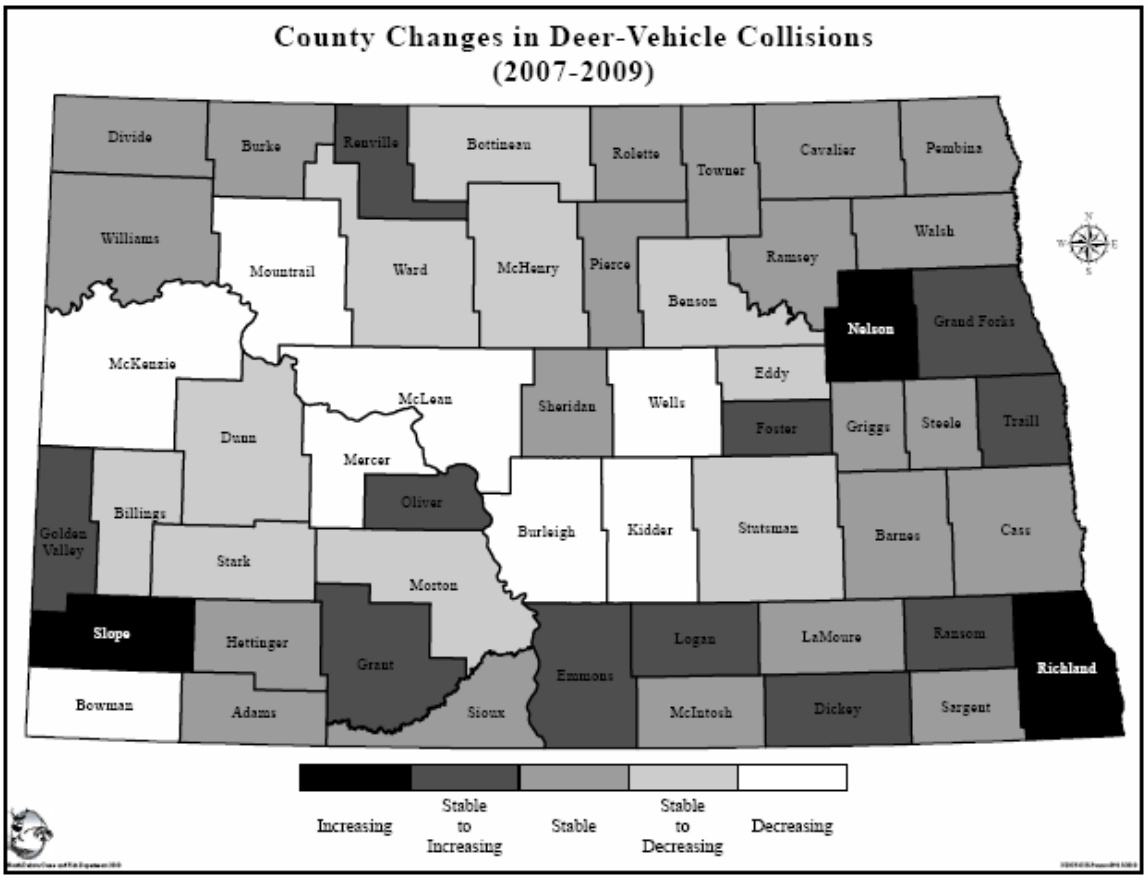


Figure 2. Map of North Dakota illustrating the use of trends in Deer-Vehicle Collisions (DVC) as a population index for each county. Year-to-year changes in DVC rates have been monitored statewide for deer population trends since 2001.

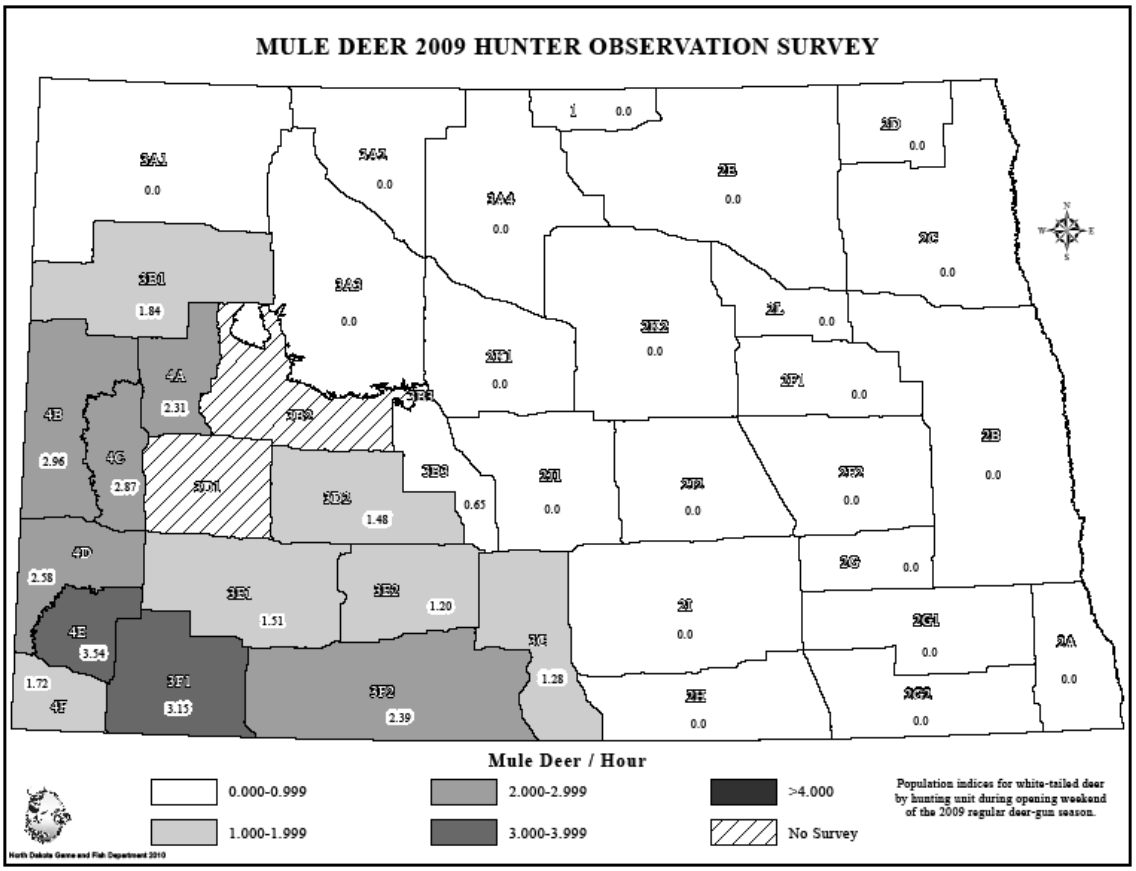


Figure 3. Map of North Dakota illustrating the use of observation rates by hunters (mule deer sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2009 deer-gun season. Year-to- year changes in hunter observation rates have been monitored for mule deer population trends in the Badlands units (4A – 4F) since 1998, and statewide since 2004.

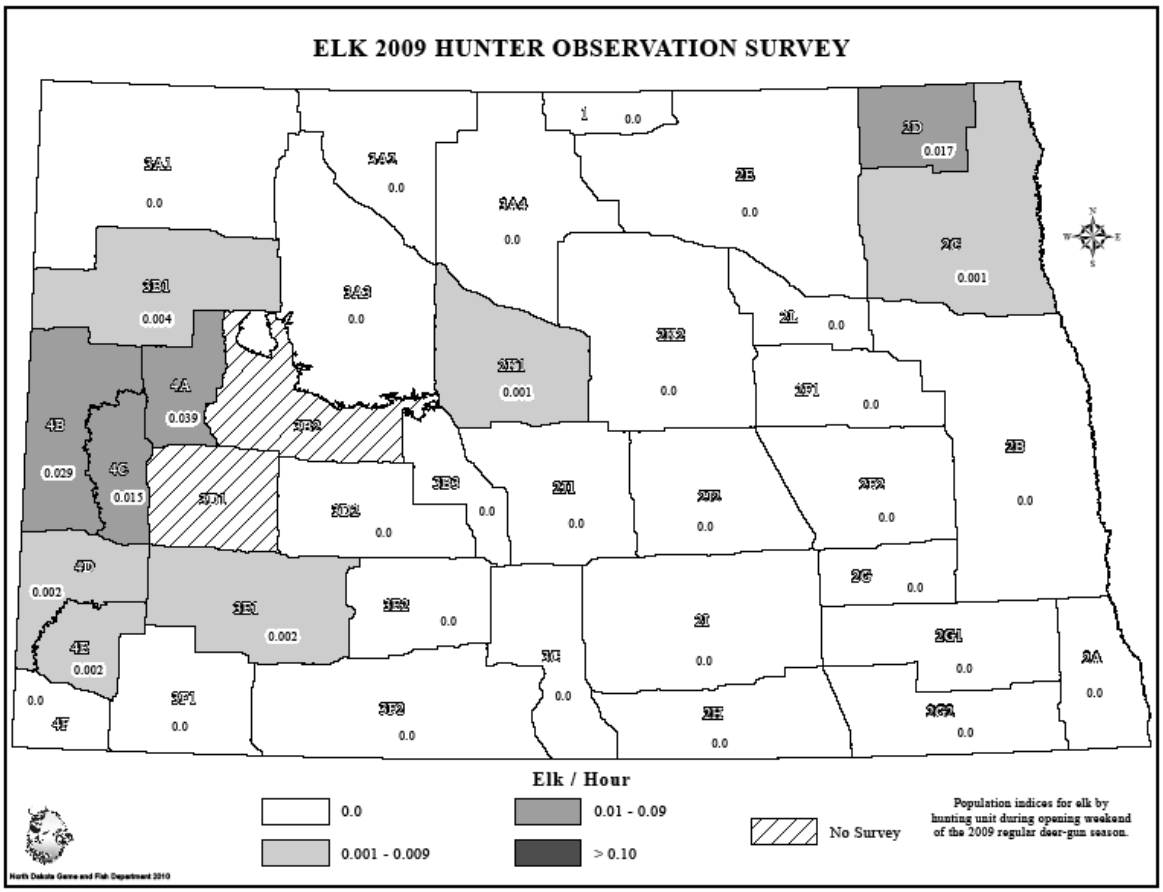


Figure 4. Map of North Dakota illustrating the use of observation rates by hunters (elk sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2009 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for elk population trends since 2007.

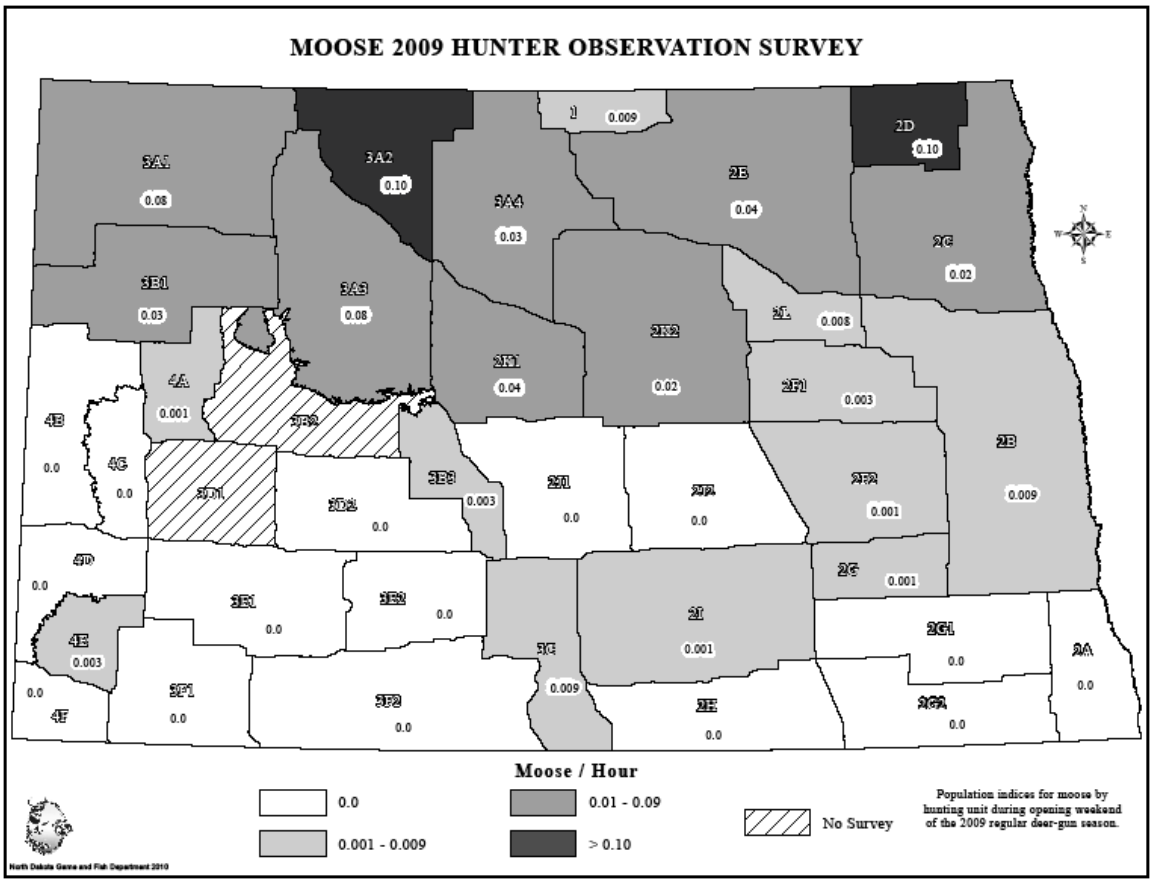


Figure 5. Map of North Dakota illustrating the use of observation rates by hunters (moose sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2009 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for moose population trends since 2007.

Ohio Deer Report

DEER REPORT

SOUTH DAKOTA

MIDWEST DEER AND TURKEY WORKSHOP

Devils Lake, ND

2010

WISCONSIN DEER STATUS REPORT, 2010

Midwest Deer & Wild Turkey Study Group
Camp Grafton, Devils Lake, North Dakota
Robert E. Rolley

POPULATION GOALS

In the Northern and Central Forest regions population goals are set relative to carrying capacity. In the three farmland regions, goals have primarily been set relative to human tolerance for deer. Prior to 2010, overwinter goals range by unit from 10 to 30 deer/mi^2 of deer habitat for a statewide overwinter population goal of approximately 740,000. Normal recruitment would have resulted in fall populations of over 1,000,000 when the population is at goal and an annual gun and bow harvest of about 300,000. In 2010, population goals were raised in many deer management units resulting in a statewide overwinter goal of almost 800,000 (see Deer Management Unit Review).

POPULATION TRENDS

Overwinter deer populations in Wisconsin fluctuated around 500,000 during the 1960s and 1970s (Figure 1). During the 1980 and 1990s, the population generally increased with occasional short-term declines due to poor recruitment following severe winters and/or intensive antlerless harvests. Most of the statewide increase in deer populations over the past 40 years was due to population growth in the farmland regions of the state. Below average recruitment and higher antlerless harvest rates in recent years appear to have stabilized or reducing populations in portions of the state but the exact effects of these high antlerless harvests are difficult to interpret because of recent changes to inputs used in population models and greater use of aerial surveys for population estimation in the southern part of the state. These changes in estimation methods are suggesting that prior estimates may have been biased low.

HARVEST TRENDS

During the 1960s and early 1970s, the combined gun and archery harvest fluctuated from a low of about 40,000 to a high of about 136,000 and averaged about 90,000 (Figure 2). Total harvest increased steadily during the late 1970s and 1980s, peaking at over 400,000 in 1991. Harvest fluctuated considerably during the 1990s around an overall increasing trend. An all-time record harvest of 618,374 was set in 2000. After a marked decrease in total harvest in 2001 and 2002, harvest during 2003-07 averaged about 500,000 deer, with about 36% of the harvest composed of antlered bucks and about 64% antlerless deer. Total harvest decreased 13% in 2008 and 27% in 2009. During the past 2 years, antlered buck harvest decreased 22% and antlerless deer harvest decreased 44%. The proportion of the total harvest taken by archers has increased steadily during the past 50 years to where archers accounted for over 25% of the total harvest and 31% of the antlered buck harvest in 2009.

HUNTING SEASON SUMMARY - 2009

The 2008 posthunt population was estimated to be about 1.0 million. The winter of 2008-09 was rated as moderate for the Northern Forest Region. Observations of fawns and does in summer 2009 indicated that recruitment was 16-20% below the long-term average in the Northern and Central Forest regions and 1-13% below average in the farmland regions. The estimated statewide fall 2009 population was approximately 1.3 million.

The 2009 archery season was held during September 12 – November 19 and November 30 – January 3. In most management units, archers were allowed to harvest one antlered and one antlerless deer during the season. Archers were allowed to harvest additional antlerless deer using free herd control antlerless permits, CWD antlerless permits or purchased antlerless deer permits. More than 260,000 people purchased licenses in 2009 authorizing them to hunt deer with a bow. Archers killed more than 87,200 deer (41,400 antlered, 44,800 antlerless, and

1,000 unknown). This was the 7th highest archery harvest on record. Approximately 90% of the archery harvest occurred in the early part of the archery season.

A 2-day either-sex gun hunt was held statewide on October 10-11 for youths aged 12-15 who had completed hunter education or youths as young as 10 who had not completed hunter education if they hunted with an adult mentor. Youth were required to be accompanied by an adult. Nearly 7,000 deer were harvested during this season.

A 4-day antlerless gun hunt was held October 15-18 in 17 CWD and 39 herd control units. The archery season remained open during these 4 days but archers were limited to antlerless deer and were required to wear blaze orange. Approximately 15,000 deer were killed with a gun in the 4-day October antlerless gun season.

Sales of 629,900 gun deer licenses in 2009 were 2.1% lower than in 2008 and were 9% below the 2001 pre-CWD level. The opening day of the firearm season was November 21. Opening morning had above normal temperatures with dense fog throughout much of the state. The fog burned off by mid morning in parts of the state but persisted until noon in some areas. Sunday morning was again warm and foggy. No portions of the state had snow cover on opening weekend. Temperatures returned to normal by mid-week abut little to no snow fell during the remainder of the season. Corn harvest was well behind the 5-year average, only 59% of the harvest was complete by mid-November compared to an average of 87%. Foggy conditions and abundant standing corn may have reduced deer sightability and warm temperatures likely reduced both hunter and deer movement. Approximately 201,900 deer (86,500 antlered, 114,000 antlerless, and 1,400 unknown) were killed during the 9-day November gun season. The 10-day muzzleloader-only season (December 1-10) resulted in a harvest of about 5,670 deer (2,160 antlered, 3,460 antlerless, and 50 unknown).

A 4-day antlerless gun season was held December 10-13 statewide and in the CWD units an either-sex gun season as held December 24-January 3. Hunting conditions during these December seasons were fair with statewide snow cover and average to below average temperatures. There were areas of significant snow cover (>18 inches) in the southern 1/3rd of the state which may have hindered movement for some hunters. Approximately 12,200 deer (1,200 antlered, 10,800 antlerless, and 200 unknown) were harvested during the December gun hunts.

In all seasons, gun hunters registered 241,862 deer. This was 31% lower than the gun harvest in 2008 and was the 25th highest on record. The gun season antlered harvest of 92,754 (-10.7% from 2008) was the 29th highest while the antlerless harvest of 146,917 (-40.4% from 2008) was the 21st highest. The combined bow and gun season harvest was 134,156 bucks and 191,715 antlerless deer. The Chippewa tribes harvested 540 antlered bucks and 842 antlerless deer in the ceded territories outside of reservations.

In total, more than 657,900 people purchased a deer hunting license (either gun, archery, or both). Of these, approximately 233,000 hunters (35%) killed and registered at least 1 deer in 2009.

A harvest quota of approximately 287,600 antlerless deer in non-CWD units was established for the 2009 gun season. This was much reduced from the quota of more than 519,000 antlerless deer in 2008. Each hunter received 1 free antlerless permit valid in 39 herd control units with the purchase of his or her regular gun and bow license. In addition, hunters could purchase an unlimited number of antlerless-only licenses in these units. More than 214,600 antlerless permits were available in 58 “regular” (buck-plus-quota) management units.

Approximately 26,000 deer were checked for sex and age at 93 of the 607 registration stations during the 2009 gun deer season. In the Northern Forest, the percentage of harvested bucks that were yearlings (48%) was below the 5-year average (52%). The percentage of yearlings among does (26%) was similar to the 5-year (27%) and long-term (27%) averages in the Northern Forest. In the Central Forest the percentage of yearlings among harvested bucks (52%) was near the 5-year average and the percentage of yearling does (23%) was below the 5-year average (26%). The farmland regions continued to show below average percentages of yearlings among bucks (41-52%) suggesting increased survival of bucks. Yearling doe percents (29-34%) were similar to or slightly below average in the farmland regions, although

there has been a gradual downward trend in recruitment evident during the past 20 years in the southern farmland region.

Antler development of yearling bucks was better than normal in the Northern Forest (61% of yearlings had forked antlers compared to a 34-year average of 57%, Figure 3). The percentage of yearling bucks with forked antlers in the Central Forest in 2009 was 4% lower than the long-term average. Antler development in the farmland regions was near the long-term average; 88% of yearlings had forked antlers.

One fatal and 7 non-fatal hunting accidents were reported during the 9-day November gun season. One non-fatal accident occurred during the archery, muzzleloader, and supplemental gun seasons in 2009.

WINTER 2009-10

The average winter severity index (WSI) for the 32 recording stations with complete records was 39.3 (mild) compared to a 30-year average of 54. On average, snow depths greater than or equal to 18 inches were recorded on only 7 days in 2009-10 and minimum temperatures less than or equal to 0°F occurred on 31 days. Severe conditions (WSI > 80) were reported from 2 stations in extreme northwestern Wisconsin and 1 from the northcentral part of the state. Recruitment of fawns and yearlings are expected to be near normal throughout most of the Northern Forest in 2010.

EARN-A-BUCK SUSPENSION AND 16 DAY GUN SEASON PROPOSAL

Public concerns were raised about the decline in deer harvests following the 2008 gun season. In April 2009 the Natural Resources Board voted to indefinitely suspend the use of EAB, outside of the CWD Management Zone, and formed a Special Study Committee to develop effective alternatives to EAB that would be acceptable to hunters and landowners. The stakeholder committee met several times during the summer of 2009 and presented its report to the Board in August. The committee was unable in the time allowed to finalize a complete package of season components but recommended a 16-day firearm season to provide additional hunting opportunity. Starting with the recommendations from this special committee, the Department developed a proposal that included a statewide 16-day November gun season; a continuous archery season from mid-September through mid or late January; a 5-day season in mid-October that combines a youth either-sex season, a statewide antlerless-only muzzleloader season, and an antlerless-only gun season in Herd Control units; a 4-day December firearm season in the southern 2/3s of the state; and a 10-day holiday gun hunt starting December 26th in Herd Control units.

Eight public hearings were held across the state during October 2009 and a web-based survey was conducted. The vast majority (89%) of online survey respondents, were bow hunters and the vast majority of respondents (87%) opposed the proposal. Based on continued public concerns about reduced deer harvests following the November 2009 gun season, the proposed changes to the deer season framework were withdrawn from further consideration.

DEER MANAGEMENT UNIT REVIEW

Deer management unit (DMU) boundaries and population goals are defined in administrative code and code specifies that the department will review and seek public comment regarding the need to modify goals and boundaries every 3 years. A stakeholder advisory panel was assembled in summer 2008 to advise the department on goal and boundary changes. The panel was composed of representatives from 13 organizations and was professionally facilitated. The panel had 3 Saturday meetings in winter and spring 2009, held several conference calls, communicated via a web site, and conducted a web based survey that received over 7,400 responses to help inform their recommendations. At the same time, the Department held more than 40 public meetings across the state to collect input. The Department proposed a concept for aggregating many of the current 130+ DMUs into 43 to improve precision of annual deer population estimates based on recommendations from the scientific review panel that reviewed the agencies deer population estimates. The stakeholder

panel recommended not changing deer management unit boundaries at this time, but conducting a 3 year study to assess the effects of unit consolidation on the precision of deer population estimates. Based on input from the stakeholder panel and the public meetings, the Department proposed to raise population goals in 13 units and reduce goals in 3 units. The net effect of the proposed goal changes amounts to a 1% increase in the statewide overwinter goal. Based on comments at 7 public hearings conducted during August 2009 the Department modified its proposal to reduce goals in only 2 units. The proposed changes were approved by the Natural Resources Board at its October meeting.

Changes to administrative code must be reviewed and approved by the natural resources committees in the state Assembly and Senate. The Senate Natural Resources Committee and the Assembly Fish and Wildlife Committee held a joint public hearing in mid December shortly after the November gun season. The season was widely reported to be one of the worst seasons in recent memory (total gun harvest was 31% lower in 2009 than in 2008). Prior to the hearing the Senate Majority Leader issued a press release calling for the firing of the DNR's deer management team. At this hearing the Department Secretary testified about the need to balance hunter's desires for a large herd with the ecosystem, agricultural, and public safety impacts of an abundant deer population. Virtually all of the public testimony was critical of the agency with many hunters and legislators voicing their displeasure over the 2009 deer season, the DNR's deer population estimate, and continuing efforts to reduce deer populations. In January the Assembly committee unanimously passed a motion to send the rule back to the DNR for changes. The Senate committee unanimously endorsed the Assembly's action.

Based on legislative feedback, the Department modified its rule proposal to increase deer population goals in 43 deer management units and reduce them in 2 units. Unit population goals would total nearly 800,000. The Natural Resources Board approved the higher goals at it March meeting along with an emergency rule so that the higher goals could be used in setting the 2010 deer season framework.

2010 DEER SEASON

Outside of the CWD zones and Metro Units, there are two types of season structures in 2010: regular (R) and herd control (HC) (Figure 4). Season dates vary among these two structures:

- Bow – Sept. 18 - Nov. 18 and Nov. 29 - Jan. 9 (R, HC)
- Youth Deer Hunt – Oct. 9-10 (R, HC)
- October Antlerless-only Gun Hunt – Oct. 14-17 (HC only)
- Gun - Nov. 20 – Nov. 28 (R, HC)
- Muzzleloader – Nov. 29 - Dec. 8 (R, HC)
- Antlerless-only Hunt – Dec. 9 - Dec. 12 (R, HC)

Regular units have deer populations below, at, or near goal. Harvest limits in most (44) Regular units are 1 antlered buck (>3" antler) with a gun license and 1 buck plus 1 antlerless deer with an archery license. A limited number of unit-specific antlerless deer tags are available in most Regular units, which allow a hunter to harvest additional antlerless deer. Unit-specific antlerless tags will be sold for $12 on a first come, first serve basis beginning at noon on Saturday, August 21st in odd-numbered deer management units and at noon on Sunday the 22nd in even-numbered units. Unused gun buck and antlerless deer tags are valid during the Muzzleloader season. Only antlerless deer may be harvested during the December gun hunt.

Some Regular units (18) have been designated as bucks-only for 2010. In these units both bow and gun hunters will be restricted to hunting only antlered bucks.

Additional harvest of antlerless deer is necessary in Herd Control units to reduce the deer population and move it toward goal. In addition to the harvest limits for Regular Units, one free antlerless deer tag that is valid in Herd Control units is issued with each gun and archery license. Additionally, an unlimited number of Herd Control Antlerless Deer Carcass Tags can be purchased for $2.00 for use during any open season in Herd Control units. A 4-day

antlerless-only gun season occurs in mid-October in these units. Thirty-eight units are designated as Herd Control units in 2010.

CHRONIC WASTING DISEASE MANAGEMENT

The CWD eradication zones and herd reduction zones were consolidated into one CWD Management Zone in 2008. Deer population reduction strategies for 2009 utilized extended hunting seasons with liberal bag limits. Deer hunting seasons within the management zone included an archery season during September 12-January 3; gun seasons during October 10-11 (youth only), October 15-18, November 21-29, December 10-13, and December 24-January 3; and a muzzleloader season November 30-December 9. Unlimited earn-a-buck regulations were used for all season segments except for the October 16-19 and December 11-14 gun hunts which were antlerless only. Free landowner permits were not issued in 2009 due to significant fiscal impacts of applying them throughout the much larger management zone. Nearly 57,500 deer (71% antlerless) were removed from the CWD management zone in 2009-10. Agency sharp-shooting activities were not conducted in winter 2009-10.

Disease surveillance activities in 2009 were focused in and around 2 monitoring areas associated with the eastern and western disease clusters and among the northern fringe of the western cluster. Additional samples were collected opportunistically throughout the rest of the CWD Management Zone. Sampling in areas of higher risk in proximity to infected cervid farms continued. Approximately 6,900 deer from the CWD Management Zone were tested in 2009-10, 179 tested positive. To date, more than 159,000 deer have been tested with a total of 1,354 free-ranging deer testing positive for CWD (Figure 5).

There has been an overall increasing trend in prevalence in all sex and age classes in the western Wisconsin core monitoring area (Figure 6). Since 2002, prevalence in adult males has risen from about 10% to over 12% and in adult females from about 4% to about 6%. Prevalence in yearling males has increased from about 2% to about 4% and in yearling females from 2% to nearly 6% since 2002. Prevalence increases are also evident in the eastern monitoring area where prevalence in adult males has increased from 2% to 8% and in adult females from 1% to 4% during 2003-2009.

Work on a comprehensive CWD management plan continued during the past year. A draft 10-year plan was released for comment in November 2008. The goal of plan was to minimize the area of Wisconsin where CWD occurs and the number of infected deer in the state. Key objectives of the plan were to 1) prevent new introductions of CWD, 2) respond to new disease foci, 3) control the distribution and intensity of CWD, 4) increase public recognition and understanding of CWD risks, 5) address the needs of our customers, and 6) enhance the scientific information about CWD. After extensive public comment the Department submitted a revised 5-year plan to the Natural Resources Board in August 2009. The Board tabled the management plan due to concerns that it lacked tools necessary to control the intensity and distribution of CWD. The Board appointed a special review committee of outside experts to review the plan and make recommendations that would increase the likelihood of controlling the disease.

The independent review panel included scientists with expertise in wildlife disease control, deer management, and public communications from the Iowa DNR, UW-Madison School of Journalism, Wildlife Conservation Society, Michigan DNR, Texas A&M University, and Alberta Fish and Wildlife Division. The review panel delivered their report in December 2009 and largely concurred with the Board's concerns regarding the limitations of the disease control tools in the management plan. Specifically they noted that 5 years is far too short a time frame for a plan to manage a disease like CWD and they stressed the importance of deer density reduction outside of the CWD Management Zone. The panel voiced concern that some techniques needed for substantial, quick, and cost-effective deer population reduction may not be palatable to 21st century Americans. The panel felt that current population goals were irrelevant from an epidemiological standpoint and that current deer season frameworks were insufficient to cause substantial deer population reductions. The panel felt that focused sharpshooting along the periphery of the endemic area would reduce the risk of disease spread

and were concerned that the public consultation process prescribed in the plan could render sharpshooting efforts ineffective. The panel stressed that CWD is a statewide issue and urged that the entire state must become involved in the effort. They felt that human dimension surveys should be conducted more frequently and reach a broader audience.

Based largely on recommendations from the Natural Resources Board and the external review panel the Department has revised the plan. Notable changes include changing the plan's duration from 5 to 15 years with progress reviews every five years, enhancing the management of escapes and depopulated cervid farms, acknowledge the importance of reducing deer densities ahead of the CWD front, identifying sharpshooting as an essential disease management tool, stressing that the current CWD Management Zone population goals are interim targets, highlighting the importance of collaborating with border states, and emphasizing that CWD is a statewide issue and that attitudes and opinions toward CWD management need to be assessed from diverse stakeholders. Additionally, the plan has been updated with information that has emerged since the development of the original plan. A draft of the revised plan has been posted on the Department's web site and consideration of the revised plan by the Natural Resources Board is scheduled for this fall.

Recognizing that reliance on recreational hunters to play a significant role in controlling CWD will require increased public support for the management program, the Department has contracted with a professional public relations/marketing firm to develop a CWD communications plan. Providing the public with timely, complete, and accurate information about CWD has been an important component of Wisconsin's CWD control effort from the very beginning. However, sufficient resources have not been directed toward communicating with the public to inform them of the magnitude of the risks posed by CWD. Furthermore, past communication efforts have largely been conducted by staff without expertise in behavioral modification marketing. The professional communication firm has conducted 3 focus groups and is currently conducting a telephone survey of hunters and landowners in the CWD affected area. Based on the results of these surveys, the contractor will develop an outreach program to enhance stakeholder understanding about CWD, its prevalence in Wisconsin, and the long-term threat the disease poses to Wisconsin's hunting tradition.

INVESTING IN WISCONSIN WHITETAILS

The Department's deer population monitoring and management system seeks to use the best science and data possible. A recent independent review found the Department's deer population modeling system to be sound but recommended a number of ways to strengthen the information base. Despite this, many deer hunters continue to voice concerns with the accuracy of deer population estimates. In response to hunter's and legislator's concerns about the accuracy and precision of deer population estimates, the Department has launched a major new initiative. The goals of this program are to optimize the accuracy and precision of deer population estimates and projections, and increase public confidence in department deer population estimates and management. This program is utilizing a one-time increase in Pittman-Robertson funding. In partnership with the University of Wisconsin, the Department is starting 4 research projects: (1) a buck mortality study, (2) a fawn recruitment study, (3) a study of deer impacts on forest ecosystems, and (4) a deer hunter participation and retention study. Another key element of the overall plan is involving hunters in the field research and in collection of data on deer observations and hunting conditions (see Deer Hunter Observation Surveys).

DEER HUNTER OBSERVATION SURVEYS

In response to hunter's and legislator's requests to incorporate hunter's observations in its population assessments, the Department initiated 2 surveys in 2009 to quantify hunter's observations of deer while hunting.

Wisconsin deer hunters were asked to voluntarily report their observations of deer and other wildlife seen while deer hunting via an online survey form. Hunters who had signed up for e-mail updates on deer issues (~ 19,000) were sent an informational e-mail about the survey

and a link to the survey's informational web page before the start of the archery and gun deer seasons. A press release was issued about the survey and an informational link was put on the Wisconsin DNR's main web page. Hunters were allowed the option of signing up for e-mail updates that specifically applied to the deer hunter wildlife survey. These hunters (~ 1,000) were sent updates of survey results every 2 weeks and were reminded to continue to record their observations during the deer hunting season. A tally sheet was made available so hunters could record their observations while in the field. The survey web page was anonymous, and allowed any hunter with computer access to report their observations. A link was provided for hunters to send in via e-mail trail camera pictures of endangered species, or of animals that are not normally seen in their hunting area. Approximately 20,000 hunting trips were reported during the 2009 archery and gun deer seasons. Statewide, hunters averaged seeing 0.19 deer per hunting hour, varying among regions from 0.14 in the Northern Forest to 0.33 in the Western Farmland. Deer sightings varied during the season, peaking in early October, declining during the archery season to the lowest level during the 9-day November gun season, and then increasing during late December seasons.

Deer hunters' observations were also collected via deer registration stubs. Successful deer hunters who registered a deer were asked how many deer they saw on the day they harvested the deer, how many hours they hunted, and their rating of the weather conditions that day. Deer sightings during 2009, pooled over all successful hunters, varied among deer management units from 0.23 to 1.16 deer/hour. Lowest reported sighting were from the Central Forest while the highest sighting rate was in the Western and Southern Farmlands. Deer hunter's ratings of weather conditions on the day they harvested their deer varied among deer management units with lowest reported ratings from central and north-central parts of the state (much of this likely due to foggy conditions on opening weekend of the November firearms season).

WILDLIFE DAMAGE ABATEMENT AND CLAIMS PROGRAM

Wisconsin has had a wildlife damage program since 1931. The current Wildlife Damage Abatement and Claims Program (WDACP) was created in 1983 by the legislature, in response to concerns from the agricultural community and with input from farmers, hunters, landowners, and wildlife damage specialists. Each county administers the WDACP to provide local control and minimize costs. The DNR only manages the program. The WDACP emphasizes wildlife damage prevention, but also offers partial compensation for damage caused by wild deer, bears, turkeys, and geese. Currently 70 of the 72 counties in Wisconsin participate in the WDACP. The WDACP is funded by a $2 surcharge on all hunting licenses, and a $12 resident and $20 nonresident bonus deer permit fee. Bonus permit revenues can only be spent for WDACP expenses (administration, damage prevention, and damage compensation).

The WDACP paid 351 wildlife damage claims for damage that occurred during 2009, reflecting $1,958,449 in appraised losses, with $1,223,860 eligible for payment. Wildlife damage claims were filed in 56 of the 70 counties enrolled in the program in 2008. Deer damage represented 76% of appraised losses statewide. Statewide, the primary crop damaged by deer was corn (appraised loss $674,991), followed by soybeans (appraised loss $264,078) and forage (appraised loss $125,003). The most commonly used abatement measure was deer damage shooting permits. In 2009, we issued a 606 Agricultural Damage Deer shooting Permits under which 3743, deer were removed. In addition, 65 Nuisance Deer Shooting Permits were issued for urban, airport, and nuisance situations, resulting in the removal of 569 deer. An abatement method used for the first time in 2000 was a venison donation program. In 2009, 133 meat processors in 60 counties chose to participate in the donation program. In those counties, hunters donated 3,921 deer amounting to approximately 176,000 pounds of venison. The cost of the venison donation program in 2009 was approximately $205,000, 91% for venison processing and 9% for advertising and administration.

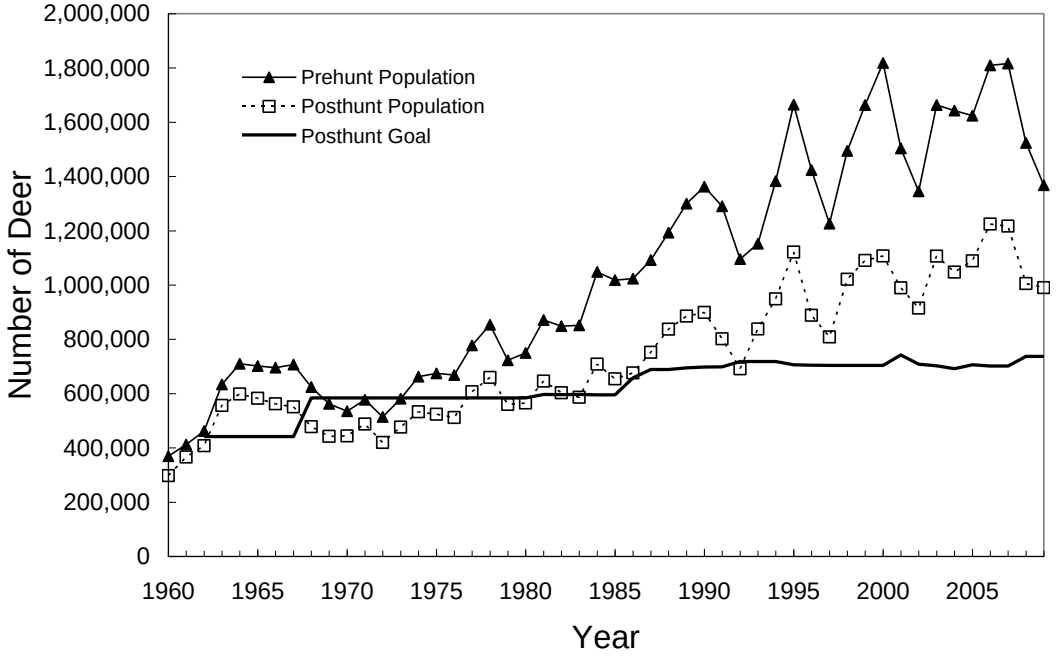


Figure 1. *White-tailed deer population estimates in Wisconsin, 1960-2009.*

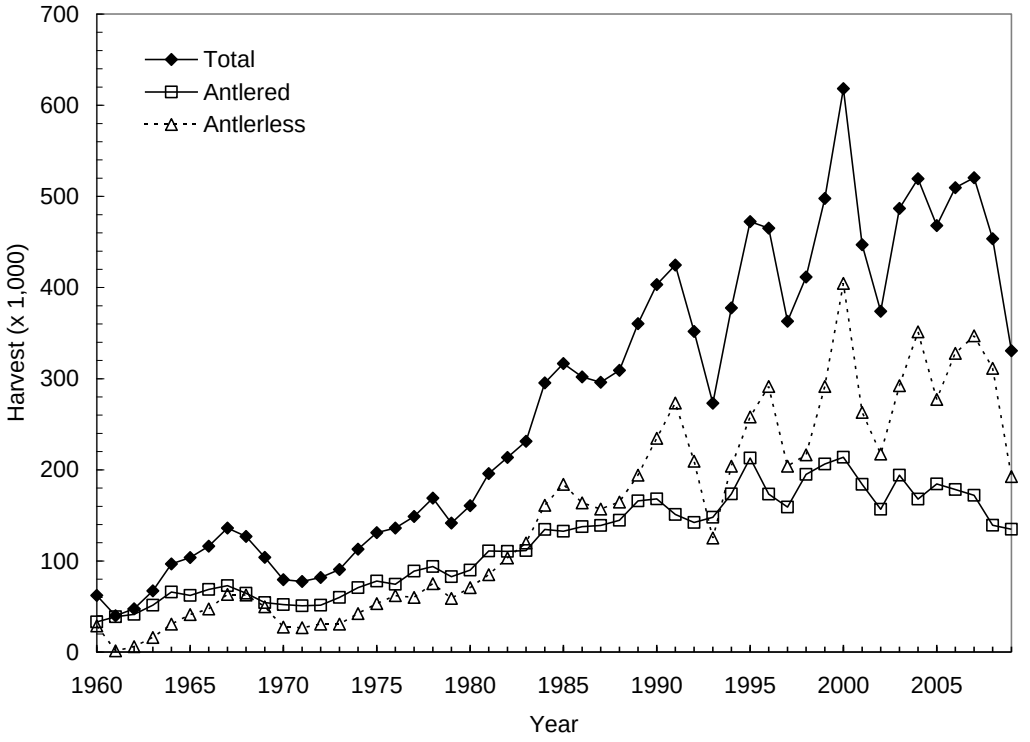


Figure 2. *Number of antlered, antlerless, and total deer harvested during gun and archery seasons in Wisconsin, 1960-2009*.

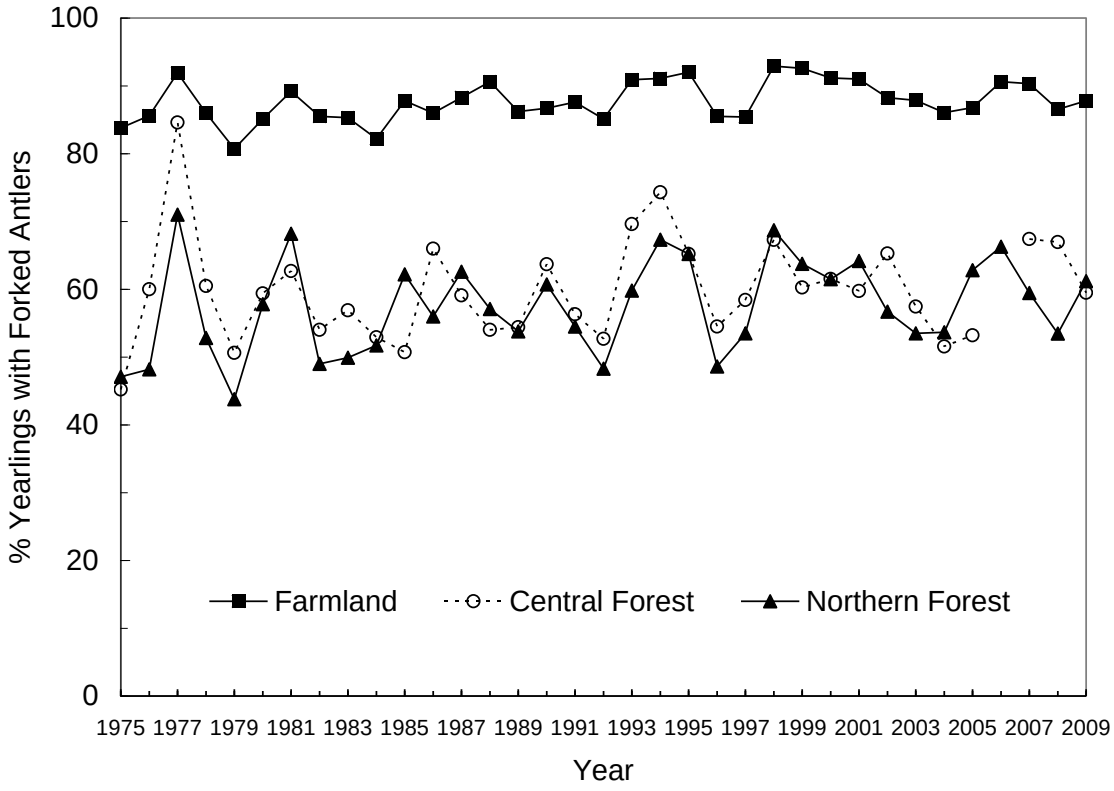


Figure 3. *Yearling antler development in the principle deer habitat regions, 1976-2009.*

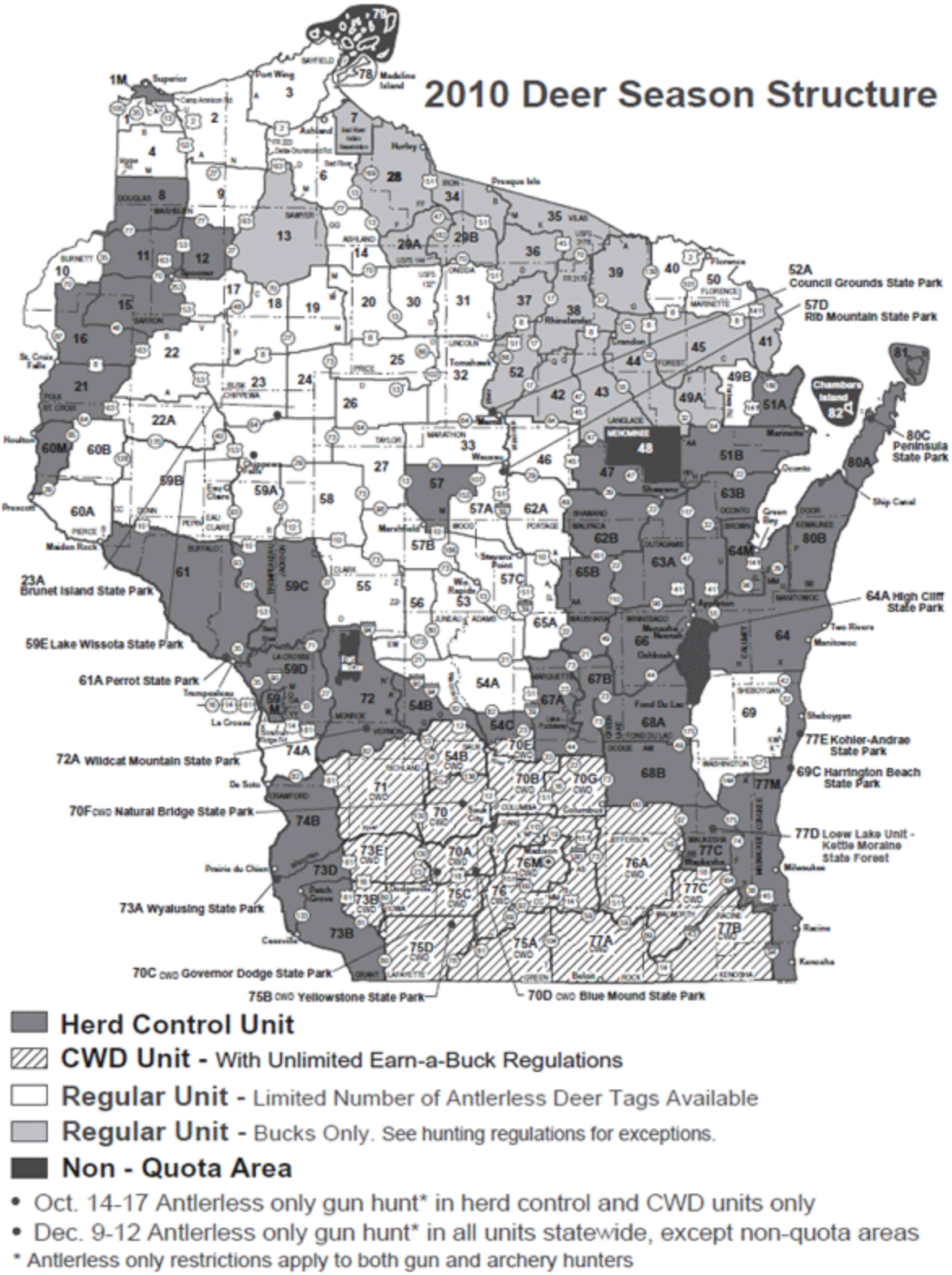


Figure 4. *Deer season frameworks in Wisconsin, 2010.*

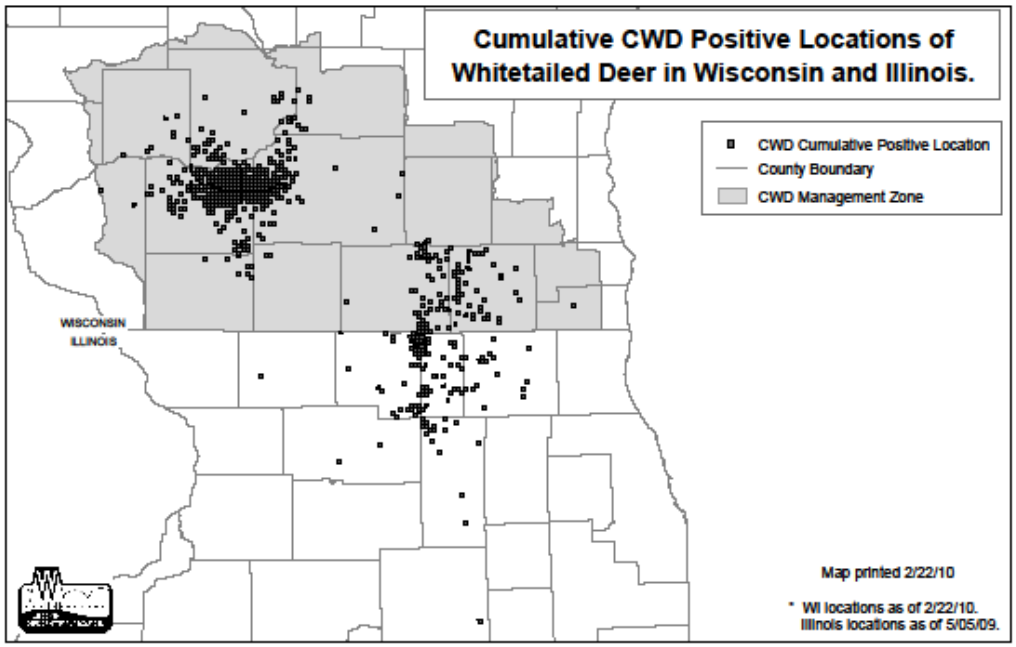


Figure 5. *Distribution of CWD positive deer in southern Wisconsin and northern Illinois, 2002-2009.*

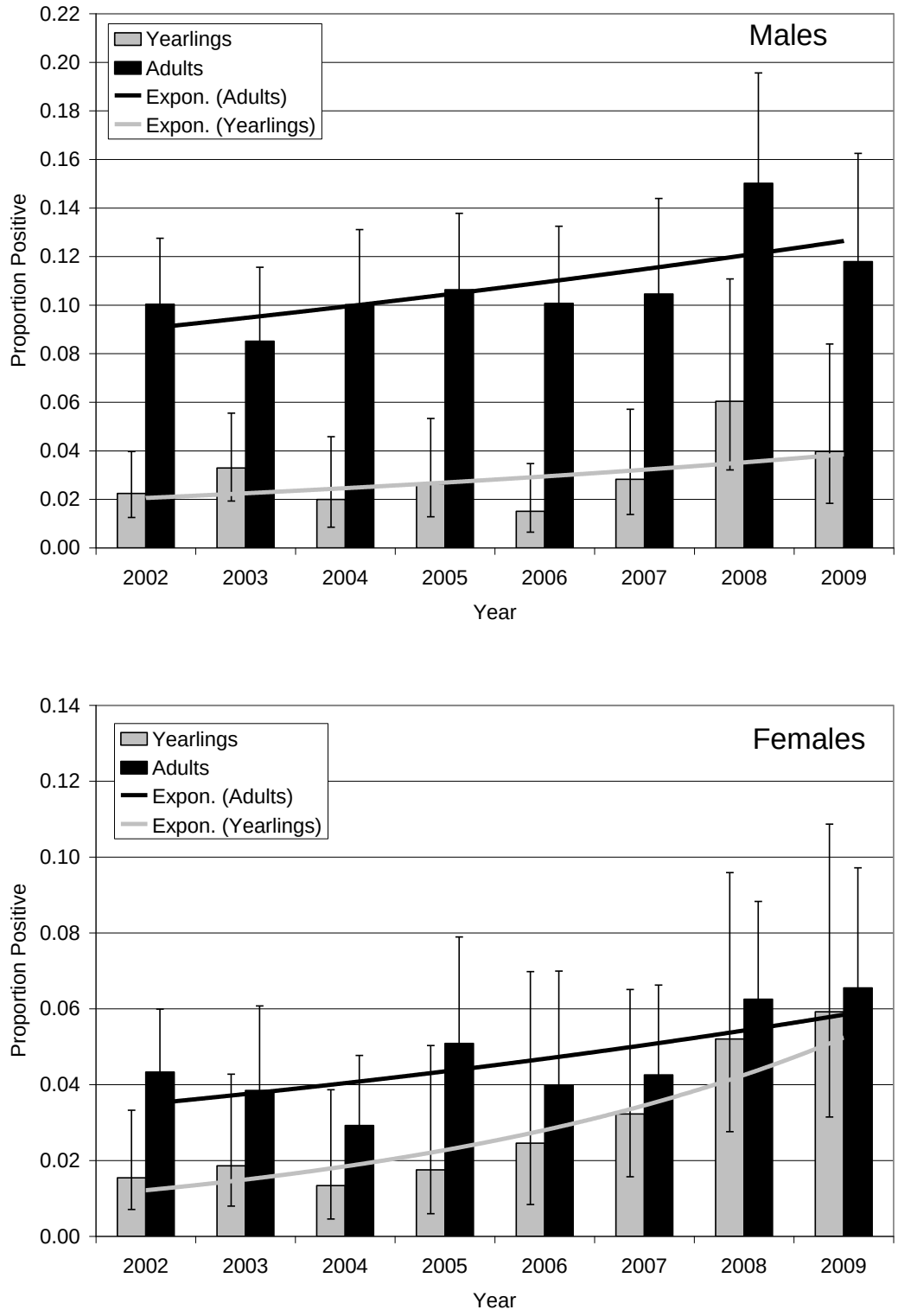


Figure 6. *CWD prevalence (± 95% confidence intervals) in yearling and adult male and female hunter harvested white-tailed deer from the western core monitoring area, 2002-2010.*

Agency

Turkey

Reports

ILLINOIS TURKEY REPORT - 2010

Illinois was finally able to hire a Wild Turkey Project Manager! Paul Brewer started in mid-June of this year. He is a 23-year veteran of the Illinois DNR and was previously a District Wildlife Biologist from east-central Illinois. Prior to joining IDNR as one of the original members of the private lands program, he was a research biologist with the Illinois Natural History Survey.

Only minor changes were made to any of the quotas for 2010. Youth and Spring Turkey harvest increased 18.2% and 2.3%, respectively, when compared to 2009.

In 2008 we increased our participation in brood count survey reporting by adding a 3% random sample by county, of persons receiving FREE Landowner Spring Turkey Permits (n=551). In 2009, additional brood survey cards were mailed to all field staff within the IDNR Office of Resource Conservation (Foresters, Natural Heritage Biologists, Wildlife Biologists and Fisheries Biologists). This year, we added mailings to all county Soil and Water Conservation Districts as well. This should increase the number of cooperators receiving Brood Survey Cards by 30+%, to over 2500. In 2011, we are currently examining some minor improvements to the directions supplied with the brood survey cards as well as some minor clarifications on the cards themselves.

Preliminary brood surveys for 2010, with roughly 500 observations recorded so far, are indicating production at 2.03 poults per hen (2377 poults/1172 hens). This estimate is comparable to production estimates for 2008 and 2009 and below the current 10 year mean of 2.71 poults per hen.

Primary responsibilities for the new project manager this year will be:

- familiarization with data retrieval from the online harvest reporting system,
- chairing the Illinois Habitat Stamp Committee,
- leading the Forest Wildlife Initiative within the Statewide Wildlife Action Plan,
- working with the National Wild Turkey Federation at technical advisor on the state Superfund Committee,
- examining a pilot program for youth turkey hunting tied to USDA's VPA/HIP program,
- examining possible changes to season dates, structure, and quotas.

ILLINOIS -- Wild Turkey Broods and Hen Observations, 1999 – 2009

Year	# Hens With/Without Broods	# Poults	Poults/Hen Index
1999	1,551	4,643	2.99
2000	1,598	5,547	3.47
2001	1,653	5,923	3.58
2002	984	3,035	3.08
2003	1,276	2,886	2.26
2004	1,590	4,219	2.65
2005	1,389	3,251	2.34
2006	1,746	4,834	2.77
2007	2,631	6,051	2.30
2008	2,109	4,387	2.08
10yr Mean	1,653	4,478	2.71
2009	2,789	5,798	2.08

Broods were reported from 84 of 102 Illinois Counties in 2007
**Cooperator list: added random 3% LO spring turkey permit holders, each county*

Yearly Turkey Harvest 1995 - 2010

Year	Youth	Spring	Fall Gun	Archery	Total
1995	--	6,918	885	163	7,966
1996	--	7,262	862	165	8,289
1997	--	7,134	976	277	8,387
1998	--	9,125	1,203	299	10,627
1999	--	10,061	1,460	470	11,991
2000	--	11,494	1,715	542	13,751
2001	75	12,840	1,427	537	14,879
2002	198	14,106	1,495	545	16,344
2003	346	14,631	1,368	555	16,900
2004	498	15,066	1,485	680	17,729
2005	450	14,962	1,120	692	17,224
2006	512	15,628	1,197	717	18,054
2007	570	14,197	1,161	754	16,682
2008	635	15,159	878	731	17,403
2009	617	15,487	760	821	17,685
2010	729	15,836			16,565

2009 Fall Gun Turkey Season was open in 45 of 102 Illinois Counties
2009 Spring Turkey Permits issued: 72,937

INDIANA WILD TURKEY STATUS REPORT

34th Annual Midwest Deer & Wild Turkey Group Meeting
Camp Grafton, Devils Lake, North Dakota
August 22-25, 2010

Steven E. Backs, Wildlife Research Biologist
Forest Wildlife Hdqts., 562 DNR Rd., Mitchell, IN 47446
TX: 812-849-4586 (ext 222); Fax 849-6013; Email: sbacks@dnr.IN.gov

Note: Complete results of turkey population and harvest surveys found at:
www.in.gov/dnr/fishwild/3352.htm

PRODUCTION AND POPULATION SURVEYS

Summer Brood Survey

District wildlife biologists and conservation officers record observations of wild turkey hens and poults during normal duty hours in July and August. The wild turkey summer brood Production Index (PI) is the total poults/total adult hens (poults:hen ratio) compiled from July and August into one combined index. The statewide mean of 2.4 poults:hen (PI) observed was slightly lower than the 2.6 PI of the 3 prior summers (2006-2008) but still within the confidence limits of 2.9 PI of the previous 5 years of 2004-2008 ($P > 0.05$). The proportion of hens observed with poults was 86%, but the number of brood observations was down again this year. The 2009 production was the 5th consecutive year below the long term average and the record high production in 2004 **(Figure 1).**

The general decreasing trend (1993-2009) in the annual summer production of wild turkeys is indicative of a population whose growth rate is beginning to level off to "maintenance" or stable population level. Prospects for turkey production during the summer of 2010 are uncertain due to a high frequency of heavy rain events during the early brood period of late May-June. For surviving broods, the above normal temperatures and dry conditions during the rest of the summer are generally favorable for better brood success.

Roadside Gobbling Counts

Gobbler counts are conducted annually during late March to April to determine the relative population trends of wild turkeys in the areas surveyed. In 2008, 10 traditional areas were surveyed in portions of 14 counties. Roadside gobbler trend routes were conducted in conjunction with roadside trend routes for ruffed grouse. Each route has 15 predetermined listening stops along 10-20 miles of rural roadways. The mean number of wild turkeys heard along 10 roadside counts during March 29 through 16 April 2010 was 0.71 gobblers heard per stop, a 10% decrease compared to the gobbling index of 0.79 in 2009. The long-term trends show an increase since 1987 except for the slightly depressed trend since the 2006 peak. The 10% decrease in the gobbling index in 2009 was not significantly different ($P > 0.05$) from the previous 5-yr mean of 0.94 gobblers heard per stop.

HARVESTS

2009 Fall Season Results

The 5th modern day fall wild turkey hunting season in Indiana was held from October 1-25, 2009. The archery-only portion of the season occurred from October 1-20 in 74 counties. The combined shotgun and archery portion occurred from October 21-25. Shotgun hunting was limited to 34 counties primarily in the southern portion of the state. Hunters harvested 773 wild turkeys in 66 of the 74 counties open to hunting during the fifth fall turkey hunting season **(Figure 2)**. The 2009 fall harvest was 27% more than the 610 birds taken during the 2008 fall turkey season and the highest harvest in 5 years of fall turkey hunting. The 20-day archery-only season accounted for 30% of the harvest with 70% of the harvest occurring the last 5 days of the combined shotgun and archery season. Shotgun hunters accounted for 58% of the harvest.

Weekends accounted for 46% of the total harvest with 32% during the one weekend of the combined archery and shotgun portions. Juvenile birds made up 19% of the harvest with a juvenile to adult ratio of 1:4. The high adult proportion (81%) was probably related to a combination below average brood production in 2009, hunter selection for larger adult birds, and age determination errors. The proportion of the fall to spring harvest by county ranged from 0% to 14% and the statewide fall to spring harvest proportion was 6% due to the conservative season structure and relatively low hunter interest.

Fall Season Expansion (Regulation Change) for 2010

A very conservative fall season was implemented in 2005 using criteria pertaining to percent forest cover, restoration status, spring harvest history/levels, and individual county proximity to other counties meeting the criteria. Additional restrictions were regulations limiting the bag limit to one bird either sex, and season length, and equipment used (archery or shotgun). One objective of a conservative harvest approach was to conduct a 4-5 year assessment of fall harvests, potential impacts on subsequent spring harvests, hunter participation, and relative hunter success under Indiana's permit structure while monitoring trends in wild turkey population indices. Harvests results for the 2005 to 2009 fall turkey seasons were summarized by hunting equipment used, portion of the season (archery/firearms), day of the season, permit type, sex and age structure, and individual county harvests. Preliminary results (i.e., 4 yrs) of the assessment were presented in last year's status report. The relatively low impact of the 2005-2009 fall seasons provided support for expanding fall turkey hunting opportunities.

Proposed changes to the fall turkey season were recently approved for the 2010 fall turkey season. Archery hunting was expanded statewide with 7 days added to the early archery portion. An additional ~30 days was added with a second archery portion that coincides with the late deer archery season (Figures 3 and 4). The fall turkey firearm (shot gun) hunting range was expanded in the south with 7 more days (12 days; includes 2 weekends). The turkey firearm range now also includes 7 counties in the north with a 5-day season (1 weekend). The fall turkey bag limit remains at 1 bird either sex per hunter for the entire fall season irrespective of weapon used or portion of the fall season hunted.

2010 Spring Season Results

The 41st spring wild turkey hunt was held 21 April to 9 May 2010 with harvest data collected at 410 volunteer check stations throughout the turkey range. Hunters harvested 13,742 wild turkeys in 88 of the 92 counties **(Figure 5).** The 2010 harvest was highest harvest since spring hunting began in 1970,

exceeding the previous high of 13,193 in 2006 by 4%. The total number of hunters in the field over the 19-day season was estimated at around 63,000 with an estimated hunter success of 22%.

The majority of the birds were harvested in the early part of the season and the early morning hours. A total of 1,554 birds were taken during the youth-only weekend prior to the regular season. The 2010 youth harvest made up 11.3% of the total harvest and was a 59% increase over the 2009 youth season harvest. Juvenile and adult weights were up slightly compared to the mean weights of previous years. The proportion of juvenile turkeys in the harvest was 19% with 54% 2-yr-olds, and 28% ≥ 3 yr-olds. The south-central and southeastern regions supported 49% of the harvest followed by northern Indiana at 23% **(Figure 6).** West-central Indiana has shown a decline since 2008.

The increased harvest (+6%) in 2010 reflects a combination of general turkey population growth around the state, especially in northern counties, and the continual increase in hunter numbers **(Table 1)**. Despite 5 years of below normal production, spring harvests and the proportion of adult gobblers in the harvest continue to increase while hunter success remains at around 22%. There is some uncertainty and anxiety that these trends can continue without some re-adjustment. Among other things, one has to wonder if the production surveys flawed, does the variable production across regions of the state have less influence on spring harvests as it did when turkey populations were less distributed, or has our conservative 1 bird bag limit buffered us against what appear to be opposing trends, i.e., is it just a matter of more time before lower production catches up with increasing demand.

Crop or Nuisance Issues

Crop depredation complaints in row crops continue to diminish each year to almost nothing some years. We did have one verified depredation complaint on a thin-skinned, specialty melon that was also likely linked to other wildlife and grower practices. Nuisance complaints are still increasing. Most nuisance complaints involve “backyard” situations, wildlife feeding, cars/residences, and sometimes linked to birds of questionable origin (imprinted wild or pen-reared). The primary root cause appears to related to “progressive generational acclimation” (PGA) resulting from the increasing practice of winter feeding for songbirds/deer using mechanical automatic feeders aka “disease inoculation centers” (DIC’s)

Other Chronic or Evolving Issues

Hunter complaints about wanting the spring turkey season dates set earlier is persistent and increasingly distracting to accomplishing other project tasks. This issue will probably be more intense in 2011 with the normal calendar shift that will takes from the earliest date (4/21) to the latest date of our spring season framework (4/27), just it did in 2004 to 2005.

Figure 1. Wild Turkey Production - Indiana

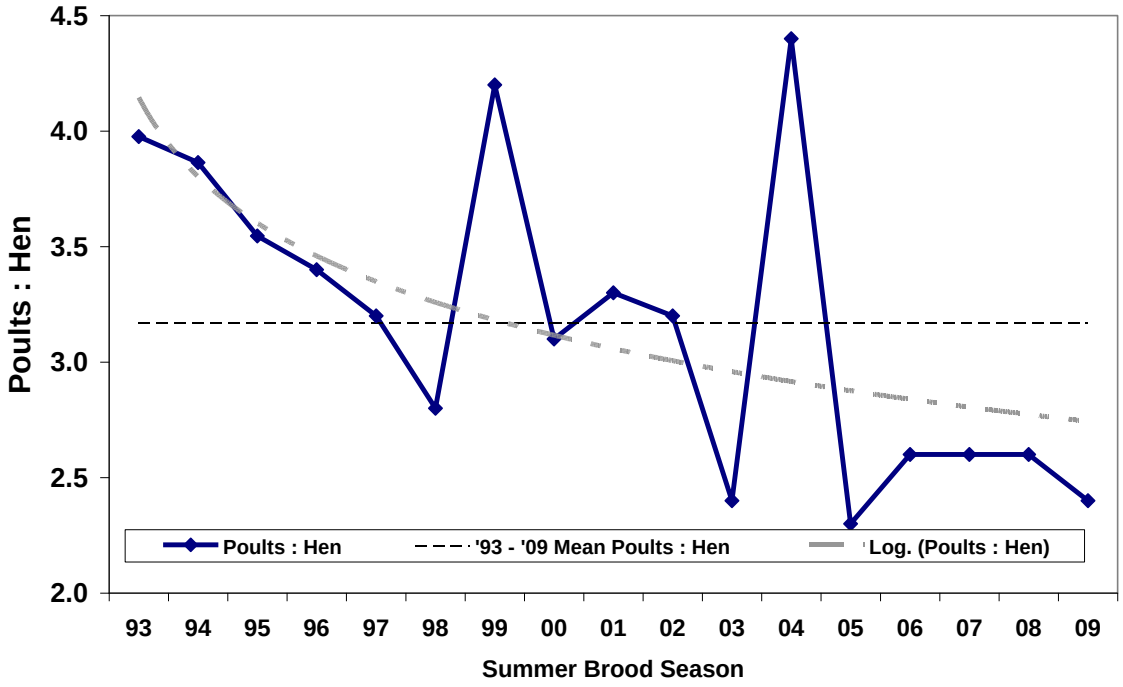
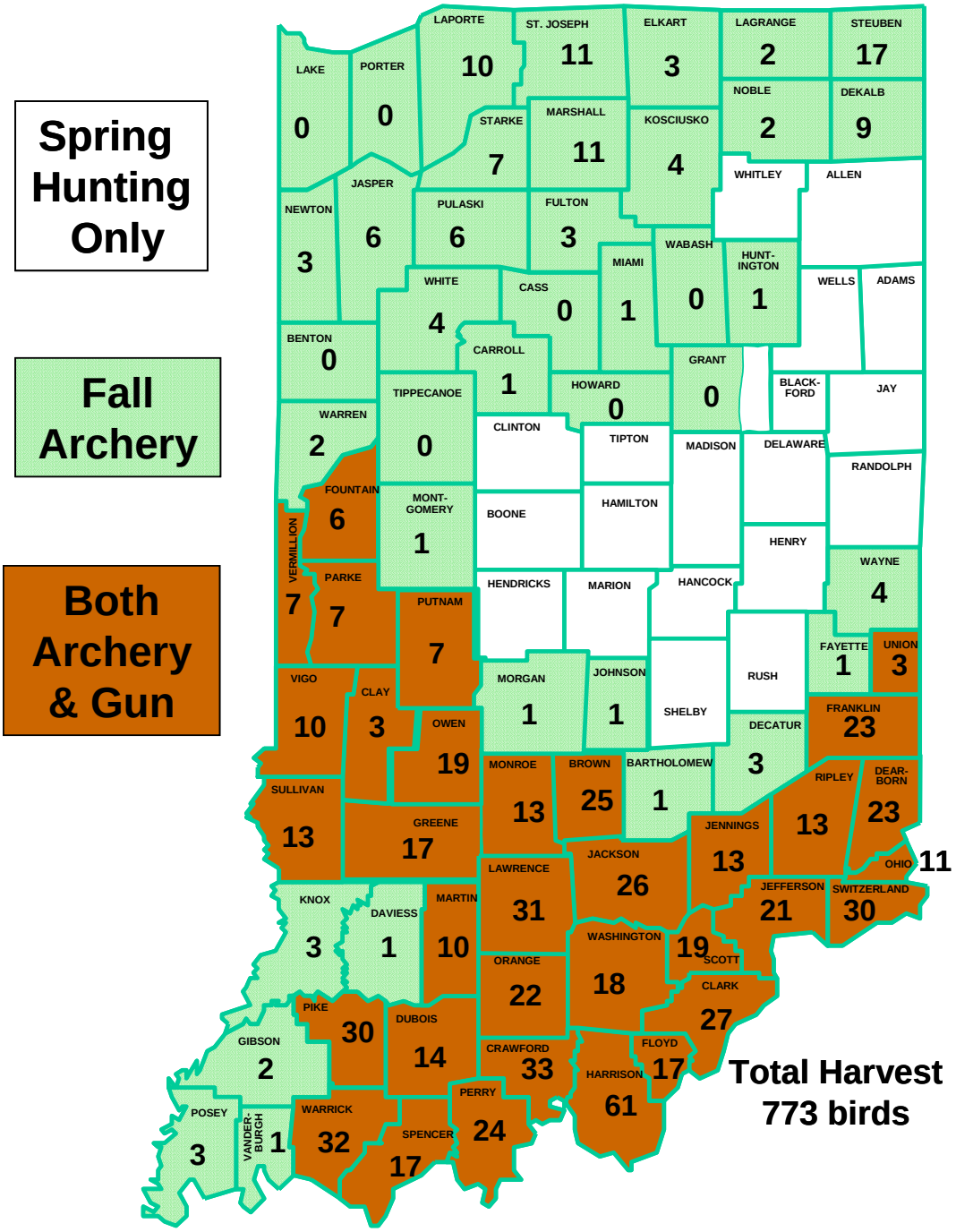
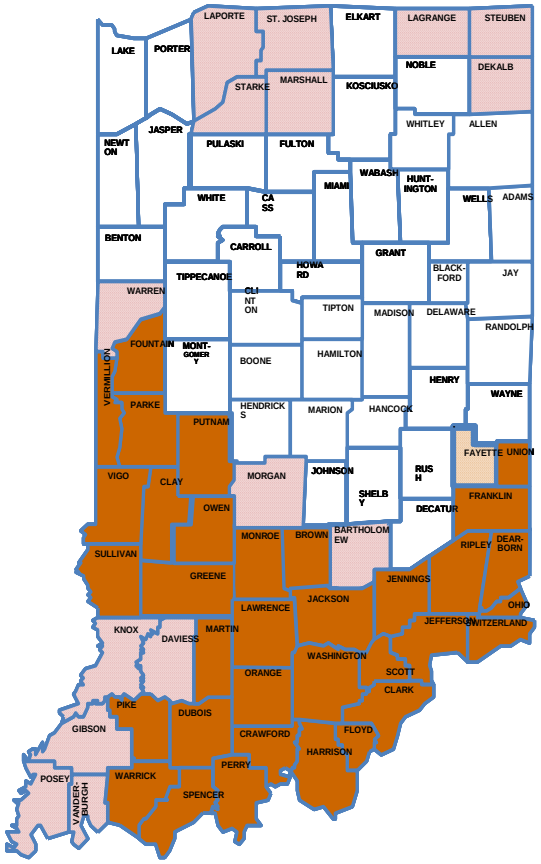


Figure 2. 2009 Fall Wild Turkey Harvest



Figures 3 and 4. New Fall Turkey Season Format -2010



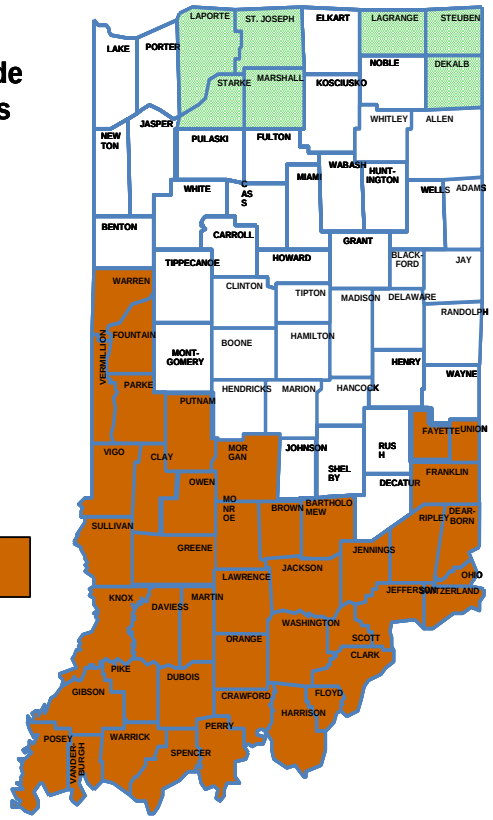
Expands Archery Statewide from 73 to all 92 counties

Archery Statewide Fall 2010

Adds 16 counties to Fall Firearms portion. (7 north & 9 south)

New Firearm Fall 2010

Current Firearm



North Firearm

Retains 5-day format

10/20 to10/24

Archery (Statewide)

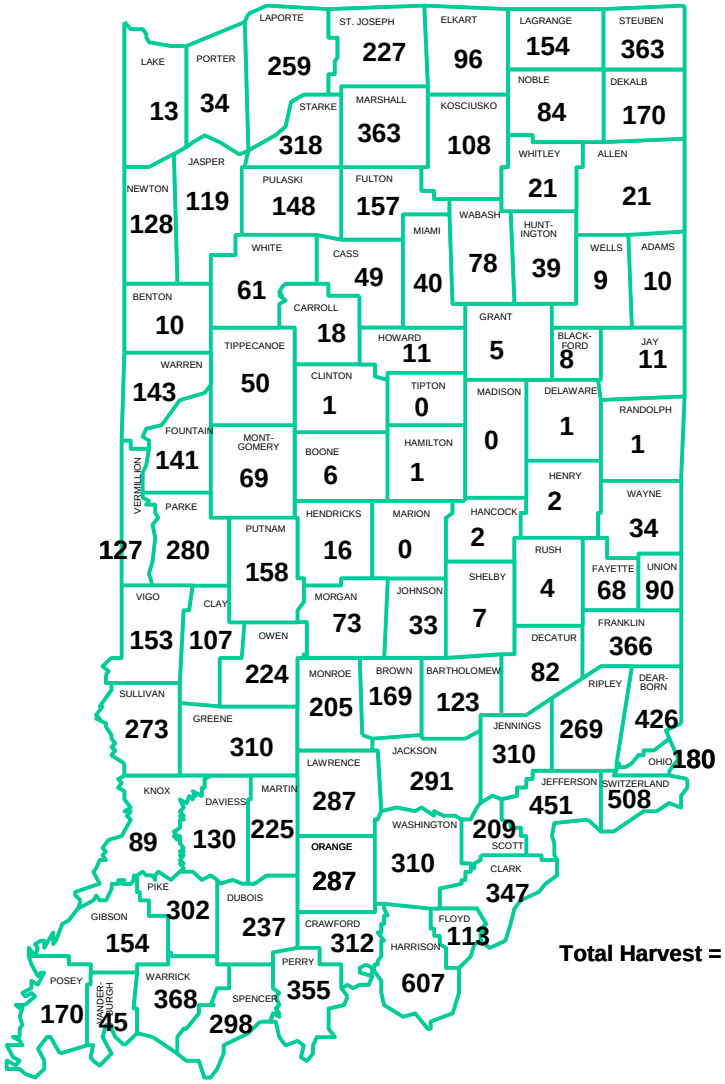
Two Separate Portions
(~ 60 days total)

10/1 to 10/31
12/4 to 1/2/2011

South Firearm
Extends current 5-day to 12 days
10/20 to 10/31

Note: One bird either sex/hunter per the entire fall season irrespective of equipment used.

Figure 4. 2010 Spring Turkey Harvest



Total Harvest = 13,742

Fig. 5. 2010 Spring Wild Turkey Harvest by Regions

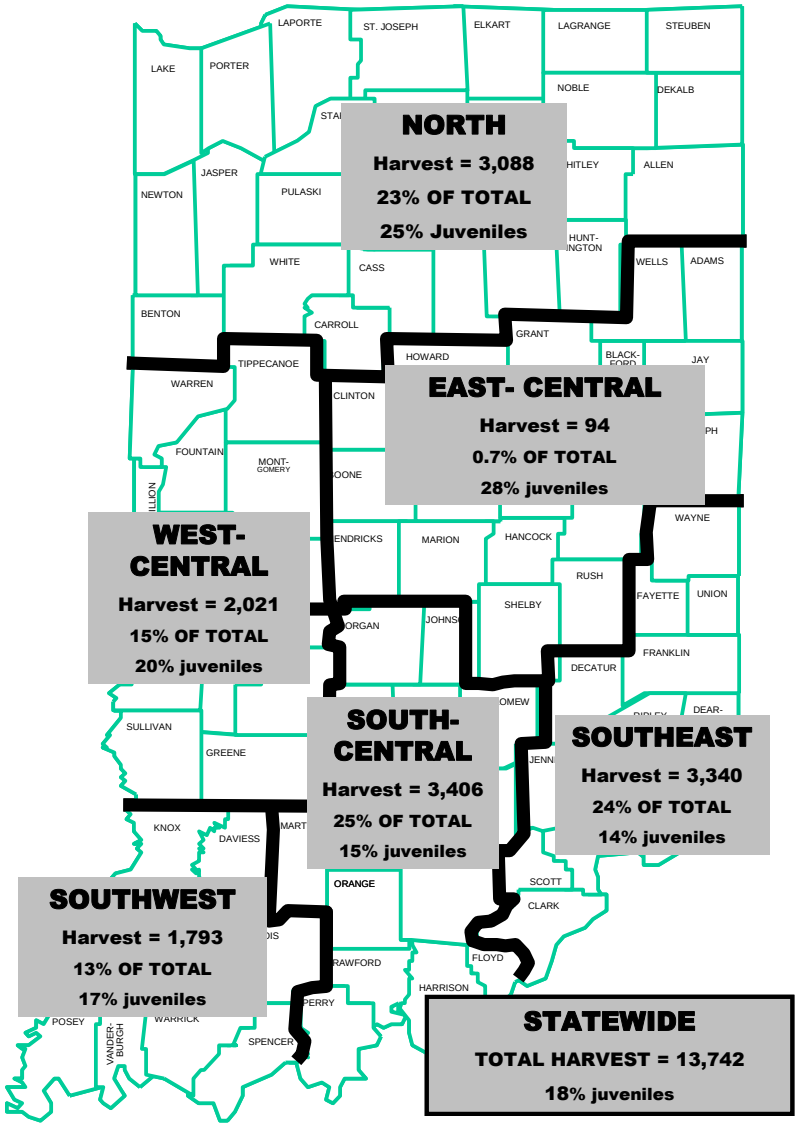


Table 1. Indiana's spring wild turkey hunting seasons, 1970 to 2010.

Year	Regular Season Dates	Season Length (Days)	No. of Counties	No. of Permits Sold*	Est. No. of Hunters**	Reported Harvest	Hunter Success
1970	5/2-5/5	4	3	75	62	6	9.7%
1971	5/1-5/5	5	9	298	224	11	4.9%
1972	4/26-4/30	5	9	585	422	12	2.8%
1973	4/25-4/29	5	11	625	503	27	5.4%
1974	4/24-4/28	5	11	665	496	26	5.2%
1975	4/29-5/5	7	11	722	501	15	3.0%
1976	4/29-5/5	7	13	666	500	32	6.4%
1977	4/28-5/5	8	16	668	520	46	8.8%
1978	4/26-5/7	12	18	852	619	33	5.3%
1979	4/25-5/6	12	19	932	860	48	5.6%
1980	4/23-5/4	12	17	706	670	54	8.1%
1981	4/22-5/3	12	18	922	814	90	11.1%
1982	4/21-5/2	12	18	1,125	696	73	10.5%
1983	4/20-5/1	12	18	1,218	984	93	9.5%
1984	4/25-5/6	12	18	1,320	1,205	104	8.6%
1985	4/24-5/5	12	25	1,882	1,302	255	19.6%
1986	4/23-5/4	12	25	2,523	1,648	293	17.8%
1987	4/22-5/6	15	33	3,348	2,619	741	28.3%
1988	4/27-5/11	15	33	10,894	4,677	905	19.4%
1989	4/26-5/10	15	39	11,442	6,068	1,359	22.4%
1990	4/25-5/9	15	39	14,379	7,860	1,505	19.1%
1991	4/24-5/8	15	43	16,387	9,643	2,318	24.0%
1992	4/22-5/6	15	43	18,735	13,110	2,531	19.3%
1993	4/28-5/16	19	48	21,078	15,673	3,500	22.3%
1994	4/27-5/15	19	48	23,357	18,622	3,741	20.1%
1995	4/26-5/14	19	52	28,858	20,861	4,706	22.6%
1996	4/24-5/12	19	52	28,733	21,442	4,859	22.6%
1997	4/23-5/11	19	74	32,703	23,085	5,790	25.1%
1998	4/22-5/10	19	74	32,889	22,876	6,384	27.9%
1999	4/21-5/9	19	74	38,730	27,285	6,548	24.0%
2000	4/26-5/14	19	74	***40,801***	***28,615***	7,822	***27%***
2001	4/25-5/13	19	74	***43,815***	***36,103***	9,975	***28%***
2002	4/24-5/12†	19	90	44,333	37,919	10,575	28%
2003	4/23-5/11	19	90	***48,857***	***40,110***	10,366	***26%***
2004	4/21-5/9	19	90	***50,839***	***41,996***	10,765	***26%***
2005	4/27-5/15	19	88	***50,839***	***49,684***	11,159	***22%***
2006	4/26-5/14	19	88	***67,290***	***50,880***	13,193	***26%***
2007	4/25-5/13††	19	91	69,861	53,402	11,163	21%
2008	4/23-5/11	19	91	***71,052***	***55,022***	12,204	***22%***
2009	4/22-5/10	19	92	***75,161***	***59,000***	12,993	***22%***
2010	4/21-5/9	19	92	***79,000***	***63,000***	13,742	***22%***
2011	4/27 - 5/15	19	92				

* After 1986, totals include lifetime licenses. After 1987, total includes youth licenses sold from Jan-May.

** No. of hunters includes those permit holders who hunted >= 1 day and since 1986 has been adjusted for non-licensed landowners or military hunters

† "All-day" turkey hunting initiated; 1/2 hr prior to sunrise to sunset.

†† Beginning with the spring 2007 season, a special 2-day youth-only season is held the weekend prior to the regular season opening.

Bold italics = *preliminary estimates based on projecting previous years' trends or means*

IOWA WILD TURKEY STATUS REPORT
Midwest Deer and Turkey Study Group Meeting
Devils lake, ND, August 22-25, 2010

Todd E. Gosselink, Ph.D., Forest Wildlife Research Biologist
IA DNR Chariton Research Station, 24570 US HWY 34, Chariton, IA 50049
todd.gosselink@dnr.iowa.gov 641-774-2958

STATUS REPORT SUMMARY:

Gun/bow combo licenses	**Licenses issued** [a]	**Harvest totals** [a]	**Hunter numbers** [a] **(> 1 license/hunter)**	**Success rates (per lic.)**	**Season dates**	**License fees**
Resident Fall 2009	7,718 (-9%)	912 (-5%)	7,170 (-8%)	10%	12 Oct - 4 Dec	Hunting fee: $17.50 Habitat fee: $11.50 Turkey lic. fee: 23.00 Total fees: $52.00 Spring 2010: added $1.50/license per trans.
Youth (< 16) Spring 2009	2, 671 (-9%)	610 (-11%)	One license/youth	23%	9 Apr - 11 Apr	
Resident - Spring 2010	41,406 (-9%)	9,156 (-9%)	32,416 (-9%)	21%	12 Apr - 15 Apr 18 Apr - 20 Apr 21 Apr - 27 Apr 28 Apr – 16 May	
Nonresident Spring 2010	2,002 (87% sold) (2,298 available)	826 (- 7%)	One license/ non-res. (-7%)	41%		Hunting fee: $82.00 Habitat fee: $13.00 Turkey lic. fee: 102.00 Total fees: $197.00
Bow only Licenses						
Resident Fall 2009	1,808 (+3%)	103 (-16%)	1,655 (-2%)	6%	1 Oct - 4 Dec 21 Dec - 10 Jan	Hunting fee: $17.50 Habitat fee: $11.50 Turkey lic. fee:$23.00 Total fees: $52.00 Spring 2010: added $1.50/license per trans.
Resident - Spring 2010	6,143 (0%)	907 (+5%)	4,343 (-23%)	15%	12 Apr - 16 May	
Totals						
Fall 2009	9,526 (-7%)	912 (-15%)	8,825 (-7%)	10%		
Spring 2010	49,551 (-9%)	10,889 (-9%)	41,432 (-13%)	21%		

[a] parentheses indicates percent change from previous year

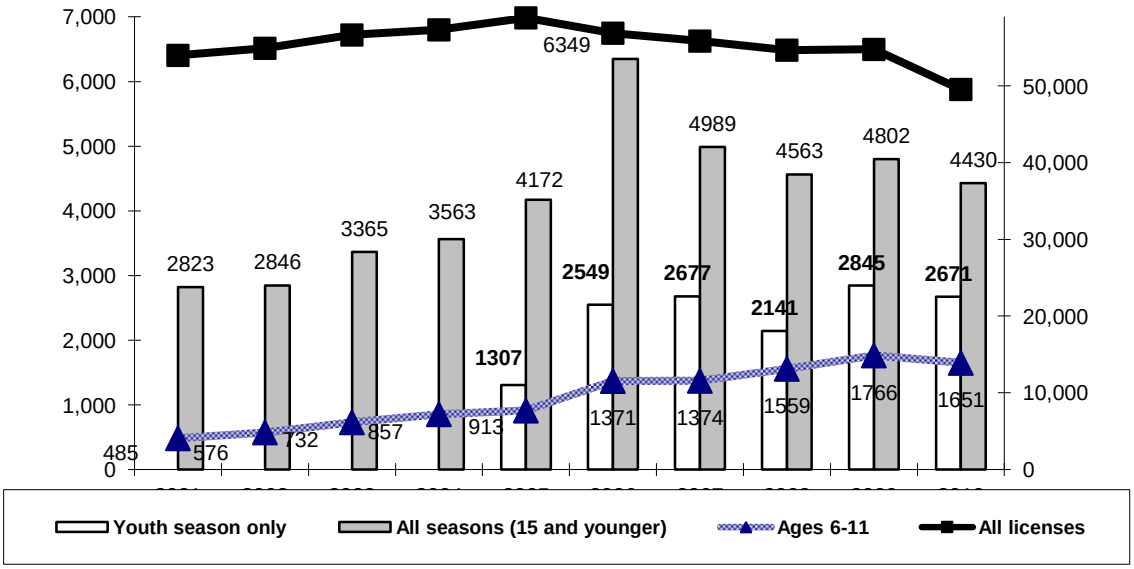


Figure 1. Iowa spring turkey license issue by age, 2001-2010.

YOUTH TURKEY HUNTING

Iowa's 6th youth spring turkey season has held in April 9-11, 2010. During the 3 day season, youth 15 and younger were allowed to participate with an accompanied licensed adult (adult licensed for one of the regular seasons). In 2005, the first year of the youth season, ages were limited to ages 12-15. Starting in 2006, ages 15 and younger could participate in the youth season. A total of 2,671 youth purchased licenses for the season (Fig. 1). Youth season license sales decreased (174 more licenses sold) in 2010.

Since the inception of ELSI (Electronic Licensing System of Iowa) in 2001, hunter age and gender has been recorded. From 2001-2006, youth spring turkey hunters (age 15 and under) increased each year. Total licenses sold (all ages) also increased from 2001-2006, but decreased in 2007 and 2008. In 2009, youth hunter numbers slightly increased, but decreased again in 2010. The total number of licenses sold has decreased each year since 2005 (Fig. 1).

BOWHUNTER SURVEY

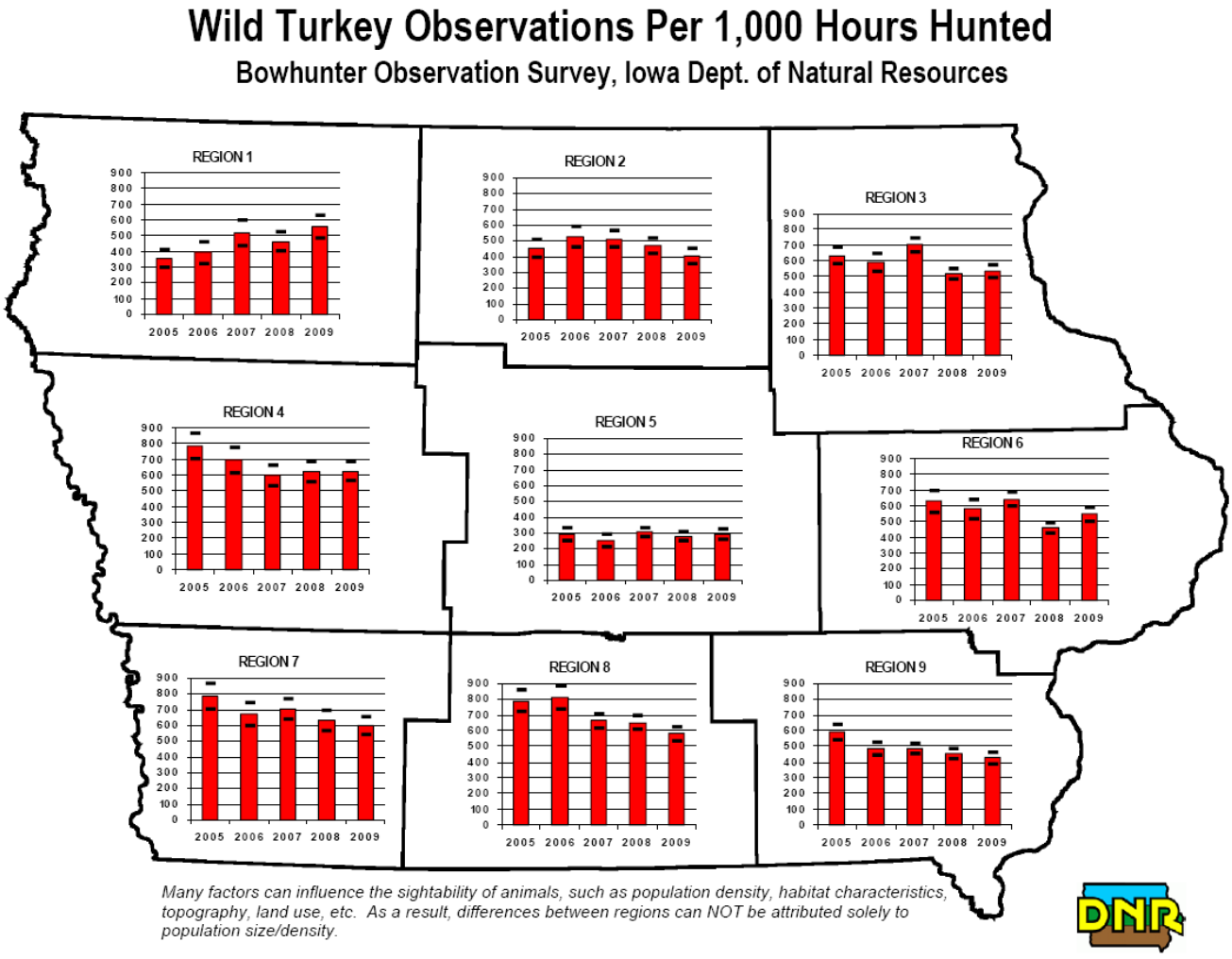


Figure 2. Bow hunter observation survey, wild turkey observations per 1,000 hrs, 2005-2009.

2009 Bowhunter Observation Survey
Iowa Department of Natural Resources

Steven D. Roberts, Ph.D., Biometrician, Iowa DNR
Dr. William R. Clark, Professor, Iowa State University

The Iowa Department of Natural Resources (DNR) conducted the annual Bowhunter Observation Survey during October 1 – December 4, 2009. This was the sixth year of the survey, which was designed jointly with William R. Clark, Professor at Iowa State University. The two primary objectives for this survey are to: 1) determine the value of bowhunter observation data as a supplement to other deer data collected by the DNR; and 2) develop a long-term database of selected furbearer data for monitoring and evaluating population trends. Bowhunters are a logical choice for observational-type surveys because the methods used while bowhunting deer are also ideal for viewing most wildlife species in their natural environment. In addition, bowhunters typically spend a large amount of time in bow stands: more than 40 hours/season is not uncommon. We believe avid bowhunters are the best hunters to select for participation in this survey because they not only hunt often, but they also have the most experience in selecting good stand locations, controlling or masking human scent, using camouflage, identifying animals correctly, and returning surveys.

Participants for the 2009 survey were selected from a list of bowhunters who had purchased a license for each of the 3 years prior to 2009 (i.e., avid bowhunters). Our goal was to select approximately 999 bowhunters in each of Iowa's 9 climate regions. Each climate region contains approximately 11 counties, and approximately 91 bowhunters were selected per county in an effort to evenly distribute observations in each region. Selection of participants consisted of a 3-step process. In each county, participants were first selected from a core group of avid bowhunters who had previously indicated an interest in participating in this survey. If fewer than 91 core group participants existed in a county, additional participants were randomly selected from a separate list of avid bowhunters who were not in the core group. Finally, if the number of "core group" and "randomly selected" participants in a county was less than 91, additional avid hunters were selected from other counties in the region to reach the regional goal of 999 participants. A total statewide sample of 8,991 bowhunters was selected for participation.

Responses were obtained from 2,027 bowhunters who recorded their observations during 31,102 hunting trips, yielding 105,287.5 hours of total observation time (3.39 ± 0.02 hours/trip; mean ± 95% CL). Bowhunters reported a median of 15 trips during the 65-day season. Regionally, the number of bow hunting trips (and hours hunted) ranged from 2,377 (7,479.5 hours) in northwest Iowa (Region 1) to 5,057 (17,745 hours) in northeast Iowa (Region 3). The raw survey response rate was 22.5%.

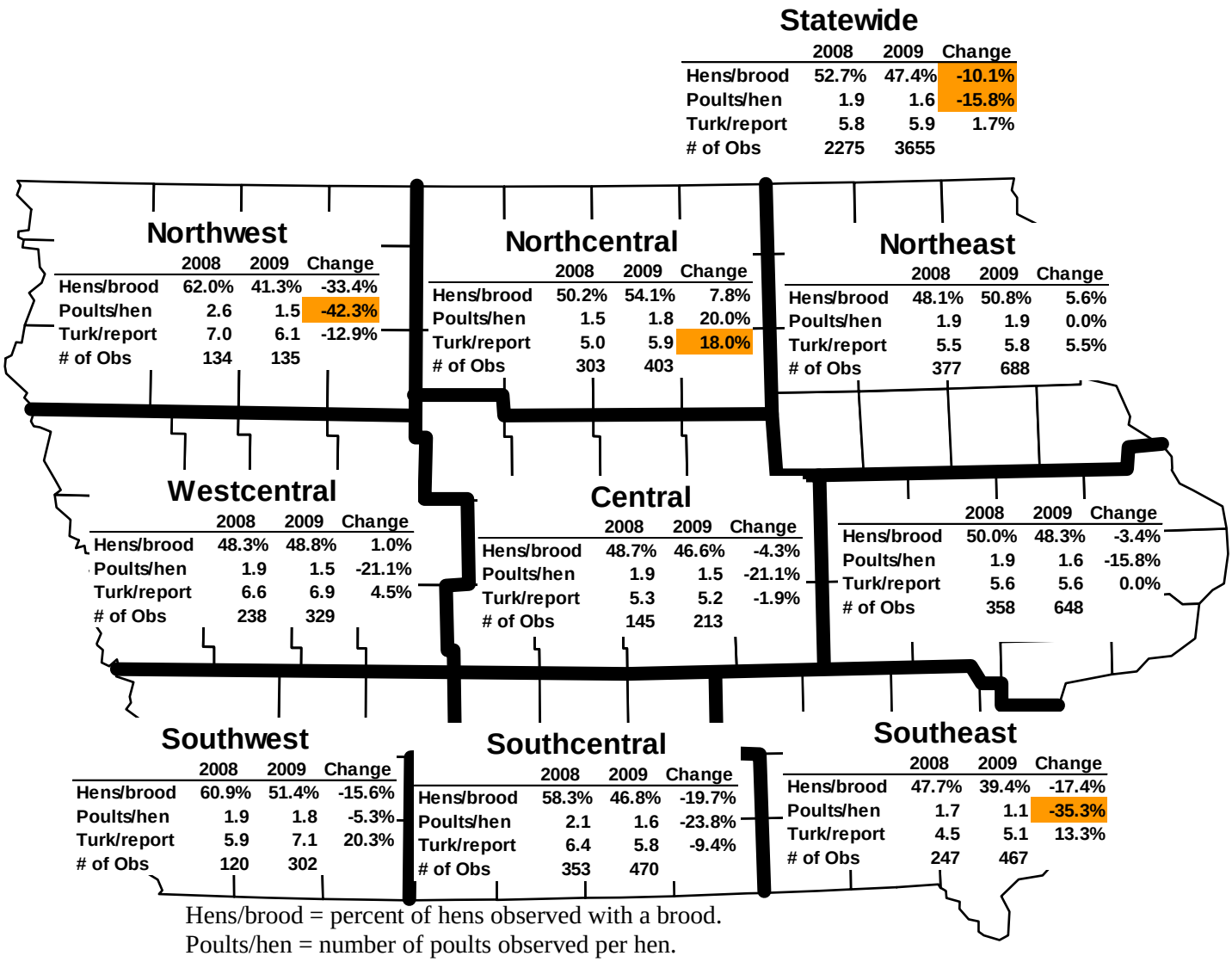
Observations were standardized for each of the 12 species to reflect the number of observations per 1,000 hours hunted in each of the 9 regions. In addition, 95% confidence limits were calculated for each estimate. Precision among estimates for common species, such as deer, wild turkeys, and raccoons, was good: confidence limits were generally within ±15% of the estimate. However, for less common species, such as badgers, bobcats, gray fox, and otters, the uncertainty associated with the estimate was quite large and occasionally exceeded the estimated value.

A comparison of results from 2008 and 2009 indicated that the number of total deer observed/1,000 hours declined significantly in northwest Iowa (Region 1). No significant changes in total deer observations were observed in any other region. The only significant change in the number of wild turkeys observed/1,000 hours occurred in east-central Iowa (Region 6) where a significant increase was observed. Bobcat observations/1,000 hours remain stationary in west-central Iowa and across the southern third of the state, and data suggest that the bobcat population is slowly expanding into northwest, central, and east-central Iowa.

The DNR thanks all hunters who participated in the 2009 Bowhunter Observation Survey. Iowa's bowhunters are the best group of hunters to provide this observational information, and their participation in this survey will play a major role in the conservation of these wildlife species in the future. The volume of information they have provided could never be duplicated by the staff of biologists, technicians, and conservation officers of the Iowa DNR.

When looking at the following charts, we caution against making comparisons between regional estimates for any species. Any differences in observation rates between regions could be related to differences in many factors such as population size, habitat, topography, land use, or any other factor affecting the sightability of animals. For each of the selected species, any differences between regions are NOT entirely related to regional differences in population size.

TURKEY BROOD SURVEY



Hens/brood = percent of hens observed with a brood.
Poults/hen = number of poults observed per hen.
Turk/report = number of turkeys counted in each observation.
# of Obs = number times turkeys were observed by cooperators.
Percent change highlighted if statistically significant

Figure 3. Iowa turkey brood survey statewide results, 1976-2009.

Iowa's 2009 summer wild turkey brood survey showed a decrease in reproduction of turkeys throughout the state based on poults observed with a hen and percent of hens observed with broods (Fig. 3). Statewide, the number of young observed per hen was 15.8% lower than last year (Fig. 3). Regionally, north-central was the only region that experienced an increase in young observed per hen from the 2008. Northeast Iowa had no change in young/hen from last year. Northwest and southeast Iowa appeared to be the hardest impacted regions of the state with a 35%-42% reduction in the number of young observed with hens (statistically different).

The number of hens with broods statewide also decreased 10% (statistically different) in 2009 compared to 2008 (Fig. 3). All regions decreased except west-central, north-central, and

northeast (Fig. 3). In 2009, northwest Iowa experienced the greatest decline (33%) with north-central the largest increase (8%) compared to 2008.

FALL 2009 HARVEST SURVEY

Fall hunting was allowed in the entire state in 2009, which was the 4th consecutive year (Fig. 4). Fall turkey hunter success rates decreased from 10.5% in 2008 to 9.6% in 2009 (Fig. 7), and still well below the 2005 and prior estimates. In fall of 2006, mandatory harvest reporting required successful hunters to report turkey harvested, and many hunters likely did not report turkeys harvested. Prior to this, harvest totals were estimated using a postcard survey after the seasons closed.

In 2009, quotas decreased from the 2005-2008 levels in most zones. Zone 4 decreased from 4,500 to 1,500, zone 5 decreased from 700 to 650, zone 6 decreased from 3,000 to 1,400, zone 7 decreased from 400 to 250, and zone 8 and 9 did not change. Shotgun/bow license issue (paid and free combined) decreased from the 2008 level to 8,825 for the 54-day season that ran from 12 October through 4 December, 2008 (Fig. 5). Over 40% of the shotgun licenses were issued free to landowners. An additional 1,808 archery-only licenses were issued for a season that ran from 1 October through 4 December, 2009 and 21 December, 2009 through 10 January, 2010. Estimated numbers of active hunters were undeterminable since there was no post card survey after the season (mandatory reporting eliminated the post card survey). Ten percent of hunters harvested a turkey, which was a large decrease from 2005 (Fig. 7), likely due to the mandatory reporting and low compliance rates, but was similar to the past four years. Hunter success rates varied from 9% in zone 9 to 22% in Zone 8. Archery only licensed hunters reported a harvest of 103 turkeys in 2009, which was 16% lower than the 2008 archery-only license harvest. The 6% success rate for 2009 archery only licenses was similar to the previous year success rates for archery-only hunters. Nonresidents have not been permitted to hunt fall turkeys in Iowa since 1990.

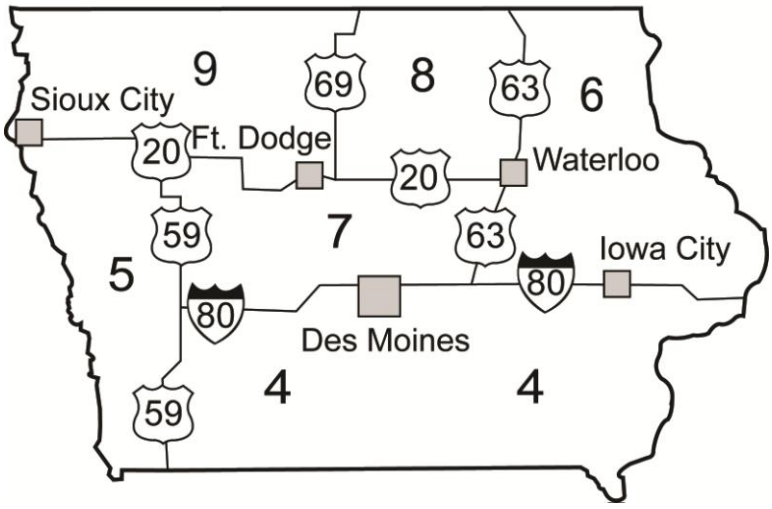


Figure 4. Fall turkey hunting zones in Iowa, 2009.

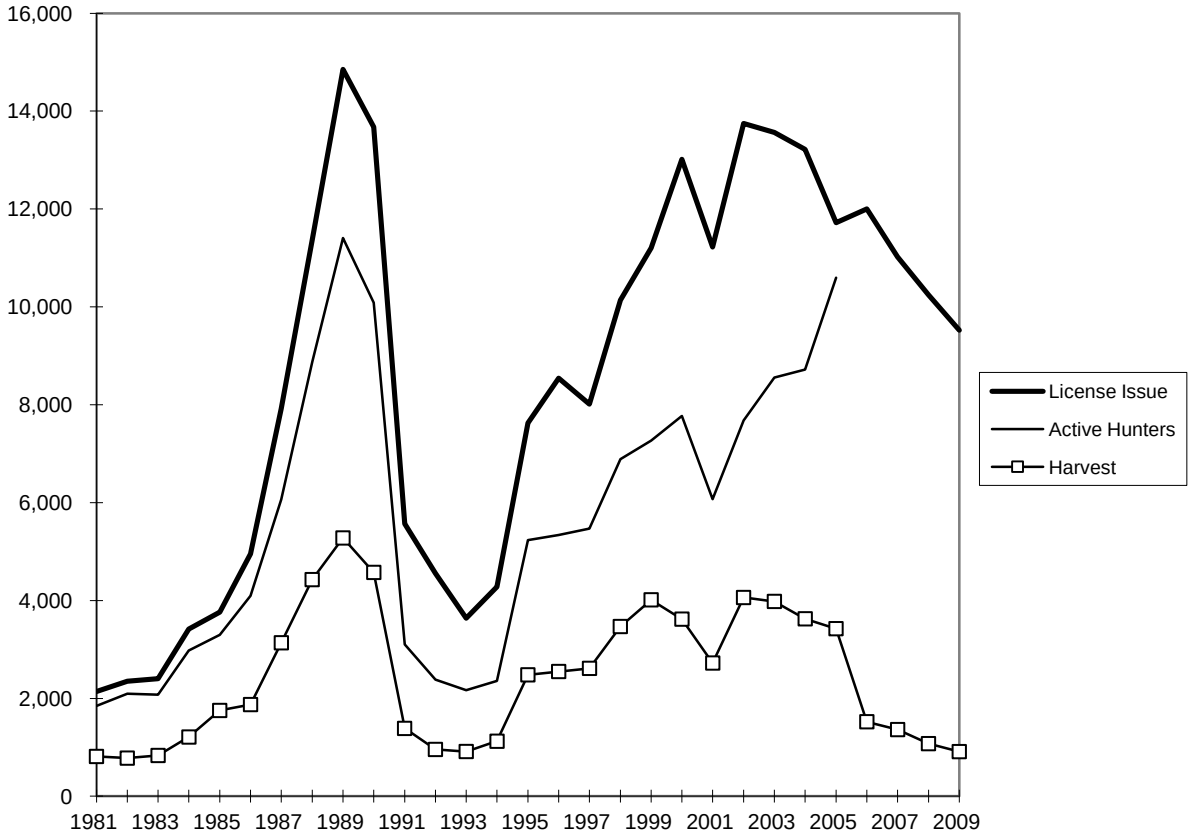


Figure 5. Iowa fall turkey hunting statewide estimates, 1981-2009

SPRING 2010 HARVEST SURVEY

Turkey hunter numbers and turkey harvest have remained similar during the last10 years, with a slight decrease in the number of licenses sold during the last 5 years, and the largest decrease in 2009 (Fig. 6). Iowa's 37th modern spring hunting season recorded an estimated 10,889 turkeys harvested, with 49,551 licenses sold (Summary Table). This was the 22nd year the entire state was open to spring turkey hunting (Table 2.11). The 38-day season (9 April through 16 May, 2010) was partitioned into 5 separate seasons: a 3-day youth-only season, and 4 regular seasons (4, 5, 7, and 19-day seasons). A decrease in the number (2,671) of licenses were sold for the youth-only season with 174 fewer youth licenses sold (Fig. 2.8). The 4-season format, with unlimited license quota an unlimited license quota for all the periods, resulted in 47,549 resident shotgun licenses issued. An additional record number (6,143) of archery-only licenses were issued. Archery-only licenses harvested 907 turkeys, resulting in a 14.8% success rate in 2010.

Twenty-one percent of the resident hunters were successful in harvesting a gobbler in 2010. Spring harvest success rates fluctuated around 20-30% during the first 12 years (unweighted average = 25.1 for 1974-85) but success increased each year during 1985-88 (Fig. 7). The success rates from 2002-2006 averaged 46.0%. The decrease in success rates beginning in 2007 and number of turkeys harvested is likely due the change in survey methods. In spring of 2007, mandatory harvest reporting required successful hunters to report turkey harvested. A

follow-up post card survey for spring of 2007 revealed 74% compliance rate, which equated to nearly 4,000 harvested turkeys that were not reported initially during the spring season. The major reasons for the non-reports were attributed to hunters forgetting to report (40%), difficulty in reporting process (29%), and unaware of the requirement (22%).

This was the 21st spring that non-residents were allowed to hunt turkeys in Iowa. Quotas were filled in zone 4 (all seasons), zone 5 (seasons 2-4), zone 6 (season 4), zone 7 (season 4) and Zone 8 (season 4) in 2010, leaving 263 licenses available. Non-resident hunters harvested 826 wild turkeys. Non-residents were more successful than residents in harvesting a spring gobbler (21% versus 41%, respectively).

In spring of 2010, known jakes (spurs < ½") harvested were 15% of the total harvest. Turkeys harvested with spurs ½" – ¾" were 27% of the total harvest in 2009. The majority (58%) of turkeys harvested had spurs > ¾". These percentages were identical or within a percent of 2009 harvests.

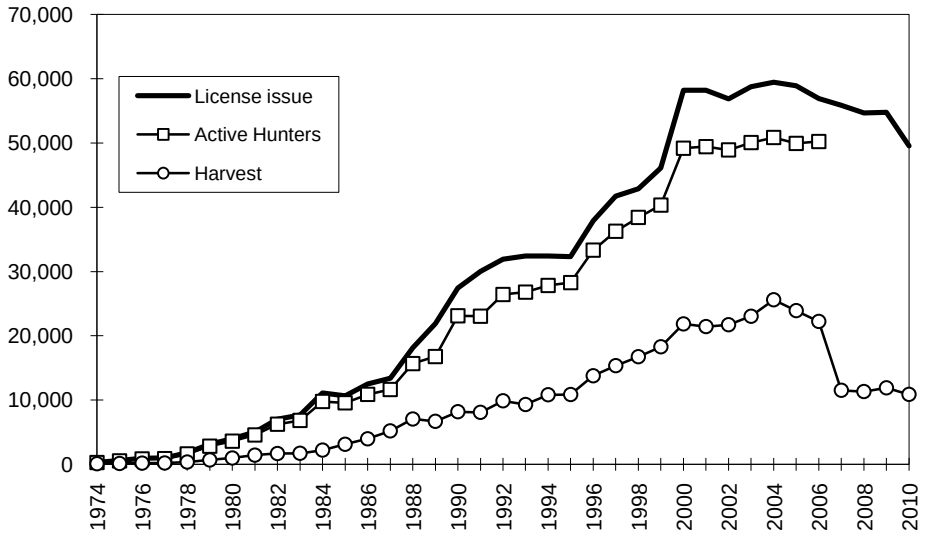


Figure 6. Iowa spring turkey hunting statewide estimates, 1974-2010. Beginning in 2007, the harvest estimates are based on mandatory harvest reporting instead of mail surveys.

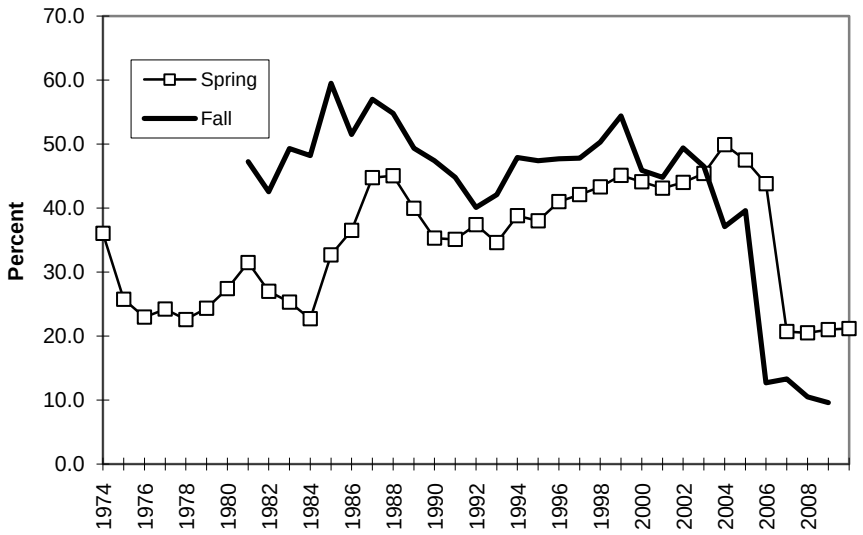


Figure 7. Iowa fall turkey harvest statewide success rates, 1974-2009. Beginning in 2006, survey estimates are based on mandatory harvest reporting instead of mail surveys.

RESTORTATION

Restoration efforts within Iowa ended in 2001, with a total of 3,583 Eastern wild turkeys that have been trapped and released at 265 sites at a stocking rate of approximately 5 adult gobblers and 9 hens per site. Nearly all sites are considered successful; however the most recent stockings are still being evaluated. No sites are currently considered to be unsuccessful. Most sites were opened to hunting after populations were established, usually about 5 years post-stocking. Restorations by the IDNR during the last 2 decades have returned wild turkeys to about 95% of the remnant timber stands in the state.

Eastern turkeys adapted so well to habitat conditions in Iowa that by 1980 the IDNR decided to start trading turkeys for other extirpated wildlife. Since 1980, 7,501 Iowa turkeys have been traded for prairie chickens, ruffed grouse, river otters, habitat monies, and sharp-tailed grouse with 11 states and 1 Canadian province.

KANSAS WILD TURKEY UPDATE
MIDWEST DEER & TURKEY STUDY GROUP
CAMP GRAFTON (DEVILS LAKE, ND)
AUGUST 22-25, 2010

Jim Pitman, Small Game Coordinator
Kansas Department of Wildlife & Parks
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Population Trends and Productivity

The rural mail carrier survey (RMCS) has been utilized since 1986 to monitor wild turkey abundance in Kansas. The RMCS is conducted 4 times annually during the 3rd weeks of January, April, July, and the 2nd week of October. During each survey period approximately 400-500 carriers travel 200,000+ miles of Kansas roadway and record observations of wild turkeys and other species. Observations are standardized (obs./100 mi.) to provide an index to the population in the state's 6 turkey management regions (Figure 1). Because the long-term trend is strongly correlated across the 4 seasonal survey periods only the results from the spring (April) survey are presented. In approximately 1998, growth of the Kansas turkey population began to accelerate in each of the 6 management regions (Figure 2). The rate of population growth was much slower in the 2 westernmost management regions likely due to less suitable habitat and frequent drought. In recent years, the Kansas turkey population in the eastern 2/3 of the state has declined. Turkey populations in the central and western portions of the state are either stable or gradually increasing.

The Kansas Department of Wildlife & Parks (KDWP) estimates wild turkey productivity using two methods. The first index we utilize is the young:adult ratio which has been calculated since 1987 from data collected by our mail carriers during the summer survey period. The second index is the young:hen ratio observed by KDWP employee during the departmental brood survey that occurs from the 3rd week of July through the 4th week of August. We have only been recording turkey observations during our KDWP brood survey since 2006 so only 4 years of data are available.

The RMCS young:adult ratio indicated that statewide production was 14.2% below the previous 10-year average during 2010 but 8.8% above the previous year. Production was improved from 2009 in every region except the northeast which received well above average precipitation during the month of June (Figure 3). However, production indices are below the previous 10-year average in every region except the southwest.

At the time of this report the 2010 KDWP brood survey had not yet been completed. In 2009, KDWP personnel observed and reported a total of 6,048 turkeys including 3,141 poults, 492 broods, 1,364 gobblers, and 1,505 hens. Turkey brood size on a statewide scale averaged 6.4 poults in 2009. The mean brood size was >6 in every region except the southwest (Table 1). Results from the first 4 years of our KDWP brood survey have correlated fairly well with the RMCS indices.

Hunters, Harvest, and Regulations

The first modern wild turkey season in Kansas was an archery-only spring season in 1974. During that first season a total of 400 permits were issued to residents and landowner/tenants. The season was open for only 9 days and 123 birds were harvested. Kansas now offers some of the most liberal seasons and bag limits in the country. Additionally, there is no minimum age to hunt turkeys in Kansas and hunters that are 15 and younger can hunt without hunter education certification if they are directly supervised by an adult. Hunters that are 12 or older may hunt by themselves during the regular season if they have completed a hunter education course.

The fall 2009 turkey season was open for 101 days across 3 segments (Table 2). Hunters pursuing turkeys in Unit 2 (Figure 4) were able to purchase 3 either sex game tags in addition to their initial permit. Only the southwestern corner of the state was closed to fall turkey hunting. No changes were made to Kansas' fall regulations from the previous year. The 2010 spring turkey season ran 61 days (including the special seasons) and permits could be purchased over-the-counter for Units 1, 2, and 3. Only 325 spring permits were available to general residents and landowners for Unit 4 (southwest KS) and they had to be acquired through a pre-season drawing. A second additional game tag could be purchased for use only in Unit 2 or 3.

The KDWP currently sells spring turkey permits to ~40,000 hunters and fall turkey permits to ~10,000 hunters (Table 3). Non-residents account for 29.1% of Kansas' spring hunters and 20.1% of the fall hunters. Kansas turkey hunters purchase approximately 79,000 permits (~66,000 spring and 13,000 fall) annually and harvest nearly 40,000 birds (~35,000 spring and 5,000 fall; Table 2-3). The percentage of hunters harvesting at least one bird was 41% and 63% for fall 2009 and spring 2010, respectively.

Recent Regulation Changes

Starting with the spring 2010 season, youth (<16) were allowed to buy permits over-the-counter that were valid in every unit. This change opened up 125 of the 325 permits originally allocated for youth in Unit 4. It also ensured that no youth would be denied a permit which happened to approximately 30 youth who applied for Unit 4 permits in 2009. Previous monitoring of harvest rates in the unit via band returns and radio-marked birds indicated that the population could easily sustain the additional harvest pressure (~100-150 more hunters). We were still oversubscribed by ~150 applicants in Unit 4 despite the additional 100+ permits that were available to general residents and resident landowners.

For spring 2010, we also offered a value-added combination license that combined the first permit and the game tag into one privilege. We offered this permit to both residents and non-

residents through March 30 at a $5 discount over the sum of the individual permits. The goal was to increase the percentage of hunters buying the game tag (second permit) and increase revenue. The combination permit did increase the percentage of residents and non-resident who bought the game tag over the previous 4-year average by 26.1% and 8.6%, respectively. The increase in sales only slightly offset the $5 discount that our constituents received resulting in a bump in revenue of only a few thousand dollars. We anticipate that the combination permit will have a greater effect on revenue next year as more people become aware of the savings.

Walk-In-Hunting Areas

In addition to publicly owned properties, all Kansas turkey hunters have access to private lands leased for public hunting through the department's walk-in hunting area (WIHA) program. During the fall of 2009, approximately 1.05 million acres were enrolled; some of which provided fall turkey hunting opportunities. These parcels were open to public access from either 1 September – 31 January or 1 November – 31 January and leased for an average of $1.58/acre. The spring turkey WIHA program is still expanding in the state and this past spring >172,000 acres of land were open to public hunting. Landowners enrolled in the spring WIHA program received an average of $1.37/acre and allowed access to their property from 1 April – 31 May. For the 5th year the state chapter of NWTF made a monetary contribution to the spring WIHA program from the state superfund. Their contribution of $7,425 allowed for the enrollment of an additional 5,400 acres. Approximately 15% of both fall and spring turkey hunters indicated that they pursued turkeys on WIHA at some point during the past year. This figure approximates the percentage of turkey hunters that utilize publicly owned land in Kansas.

For the 2nd consecutive year, the KDWP has also leased additional private land for limited access special hunts. The program was started to try and acquire more public hunting access near our urban areas. It was believed that landowners near major urban areas would be more willing to enroll their properties in an access program if we limited the number and/or type (e.g. youth) of hunters. The program allows landowners to choose the number of hunter days and/or type of hunters they will allow on their property. The payment rates are adjusted according to the number of hunter days with more days equaling a greater payment.

The spring special hunts program is just getting rolling but in spring 2010 we leased >5,200 acres in the target counties which provided 889 days of hunter access. The average cost per acre for the tracts enrolled in the program was $0.91 which is less than the general WIHA payment. This was done to try and prevent people in the general WIHA program from switching to the special hunts program. A post-season survey of successful applicants revealed that the vast majority of hunters utilizing this program were very satisfied with it. Most of those hunters saw game and the majority had the opportunity to harvest a turkey.

Translocation Efforts

For the most part, turkey stocking efforts have been completed in Kansas. However, the department still moves birds regularly to address nuisance complaints. The departmental turkey committee develops a priority list for translocated turkeys each year should birds need to be moved. For the winter of 2009-2010 the field staff identified 4 suitable sites in western Kansas

for translocations. The KDWP was able to capture 125 birds (Rio Grande & Hybrid) at 2 trap sites and they were translocated to 1 of the 4 sites on the priority list.

Due to concerns about poor band retention rates on gobblers the KDWP started using locking aluminum bands four years ago on gobblers. We continue to use the standard aluminum butt end bands on females because comparably sized locking bands were not yet available the last time we placed an order. During 2010 a total of 9 bands were recovered and reported to the department. Of the 301 males (81 gobblers and 220 jakes) banded over the last 4 years a total of 23 (19 gobblers and 4 jakes) were harvested and reported by hunters during the first season following capture. This equates to minimum apparent harvest rates of 1.8% and 23.5% for jakes and gobblers, respectively. However, most of the banded birds were in hunt Unit 4 where the number of hunters was regulated through a pre-season drawing.

Research

Currently, the University of Wisconsin (Dr. Scott Lutz) is finishing up a 2 year research project in north-central Kansas that was supported by contributions from the NWTF, KDWP, and the University of Wisconsin. The research assessed spring (April 1 – May 31) survival on 3 public wildlife areas and adjacent private land within 3 different hunting units. Regulations were most restrictive on Cedar Bluff WA which fell within a unit with a 1 bird spring bag limit only open to 325 Kansas residents through a pre-season drawing. Over-the-counter permits were available for the other two locations but one site was in a unit with a 1 bird spring bag limit (Webster WA) and the other fell within a unit with a 2 bird bag limit (Lovewell WA).

Survival did not differ by year or land ownership (public and private) but varied greatly across the 3 study sites. Pooled survival estimates were 0.814 (95% CI: 0.706-0.939) at Cedar Bluff WA, 0.310 (95% CI: 0.197-0.486) at Webster WA, and 0.408 (95% CI: 0.259-0.643) at Lovewell WA. Hunter harvest or crippling accounted for 63-70% of mortality across the 3 study sites. The remaining mortality was predation likely by bobcats and coyotes. Results from this study indicate that gobbler survival was not detectably different between Kansas hunt units managed with spring bag limits of 1 or 2 birds and unlimited permit availability. This is likely the case because few active hunters (<25%) fill a second tag and other factors influence local harvest rates as much or more than permit availability (e.g. proximity to urban areas, habitat composition, etc.). The restrictive regulations imposed at Cedar Bluff WA certainly play into the much higher survival rate than observed at the other two sites.

A secondary objective of the project was to identify reproductive chronology and recruitment rates for hens. Those data were not available to the author at the time of this report.

Table 1. Regional wild turkey production indices in Kansas derived from the Kansas Department of Wildlife and Parks' summer brood survey, 2008-2009.

	Young:Hen			Brood Size		
Region	2008	2009	% Change	2008	2009	% Change
Northwest	3.18	2.19	-31.1	6.58	6.15	-6.5
Southwest	2.41	3.47	+44.0	6.49	5.78	-10.9
Northcentral	2.96	2.73	-7.8	6.36	6.41	+0.8
Southcentral	2.06	2.23	+8.3	6.62	6.54	-1.2
Northeast	1.87	3.18	+70.1	6.47	6.94	+7.3
Southeast	0.88	1.05	+19.3	5.43	6.06	+11.6
Statewide	2.10	2.09	-0.5	6.40	6.38	-0.3

Table 2. Kansas wild turkey season dates, total harvest, and hunter success, 2006-2010.

	Spring			Fall		
Year	Season Dates	Total Harvest	Success[a] (%)	Season Dates	Total Harvest	Success[a] (%)
2006	Youth/Disabled: Apr. 7-9 Regular: Apr. 12–May 31	34,164	66	Seg. 1: Oct. 1-Nov. 28 Seg. 2: Dec. 11-31 Seg. 3: Jan. 8-31 (07)	6,112 (33%)[b]	53
2007	Archery-only: Apr. 1-10 Youth/Disabled: Apr. 6-8 Regular: Apr. 11– May 31	33,913	62	Seg. 1: Oct. 1–Nov. 27 Seg. 2: Dec. 10-31 Seg. 3: Jan 7-31 (08)	4,716 (36%)	42
2008	Archery-only: Apr. 1-8 Youth/Disabled: Apr. 1-8 Regular: Apr. 9– May 31	35,040	65	Seg. 1: Oct. 1–Dec. 2 Seg. 2: Dec. 15-31 Seg. 3: Jan 5-31 (09)	4,871 (34%)	42
2009	Archery-only: Apr. 1-7 Youth/Disabled: Apr. 1-7 Regular: Apr. 8– May 31	33,350	61	Seg. 1: Oct. 1–Dec. 1 Seg. 2: Dec. 14-31 Seg. 3: Jan 11-31 (10)	4,664 (35%)	41%
2010	Archery-only: Apr. 1-13 Youth/Disabled: Apr. 1-13 Regular: Apr. 14– May 31	34,991	63	Seg. 1: Oct. 1–Nov. 30 Seg. 2: Dec. 13-31 Seg. 3: Jan 10-31 (11)	NA	NA

[a] Success was the percentage of active hunters harvesting ≥ 1 bird.
[b] Percentage of harvest composed of females.

Table 3. Number of permits sold for Kansas' spring and fall turkey seasons, 2008-2009.

Permit[a]	Spring (2010)	Fall (2009-2010)
Resident permit ($22.50)[b]	15,048	5,702
Resident combo ($27.50)	4,831	NA
Non-resident permit ($32.50)	10,650	2,139
Non-resident combo ($47.50)	1,988	NA
Landowner/tenant permit ($12.50)	5,018	2,078
Landowner/tenant combo ($17.50)	1,205	NA
Resident youth permit ($12.50)[c,d]	3,772	729
Resident youth combo ($17.50)	846	NA
Resident game tags ($12.50)	7,383	1,898
Non-resident game tags ($22.50)	7,010	411
Total Tags	66,621[e]	12,957

[a] Turkey hunters must also buy an annual small game license (resident = $20.50, non-resident = $72.50, and non-resident under 16 = $37.50)
[b] The price of all permits includes an agent fee ($1.00) and processing fee ($1.50).
[c] Individuals ≤16 are considered youth.
[d] Non-resident youth must purchase a regular price non-resident permit.
[e] The total number of valid tags does not equal the sum of all the issuances because the combination permits include two tags.

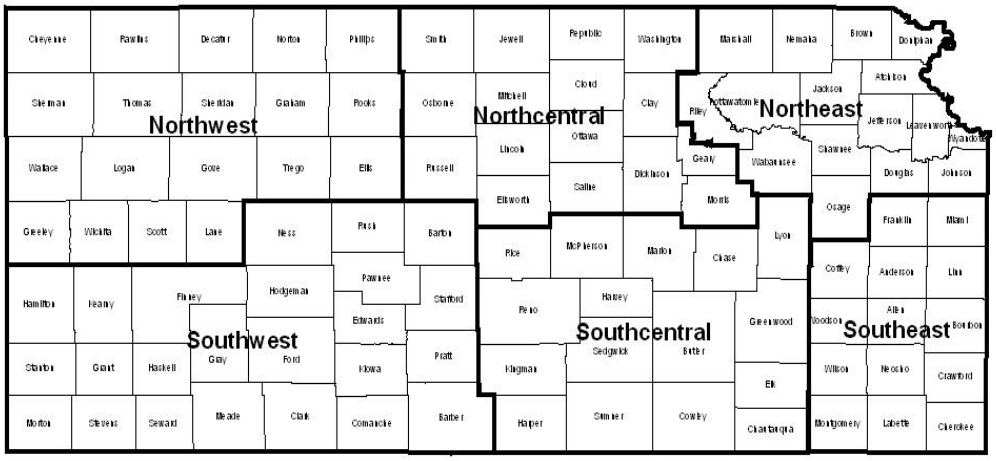

Figure 1. The 6 wild turkey management regions of Kansas, 2008-2009.

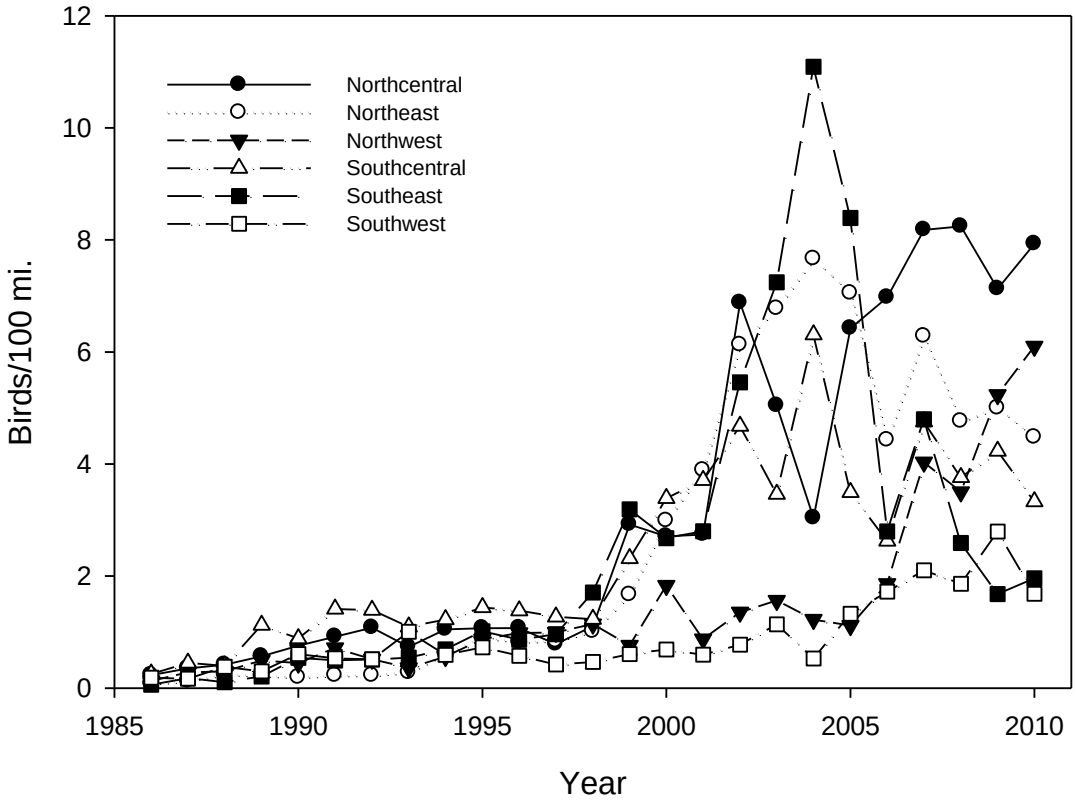

Figure 2. The spring rural mail carrier index (birds/100 mi. traveled) to wild turkey populations in the 6 Kansas management regions, 1986-2009.

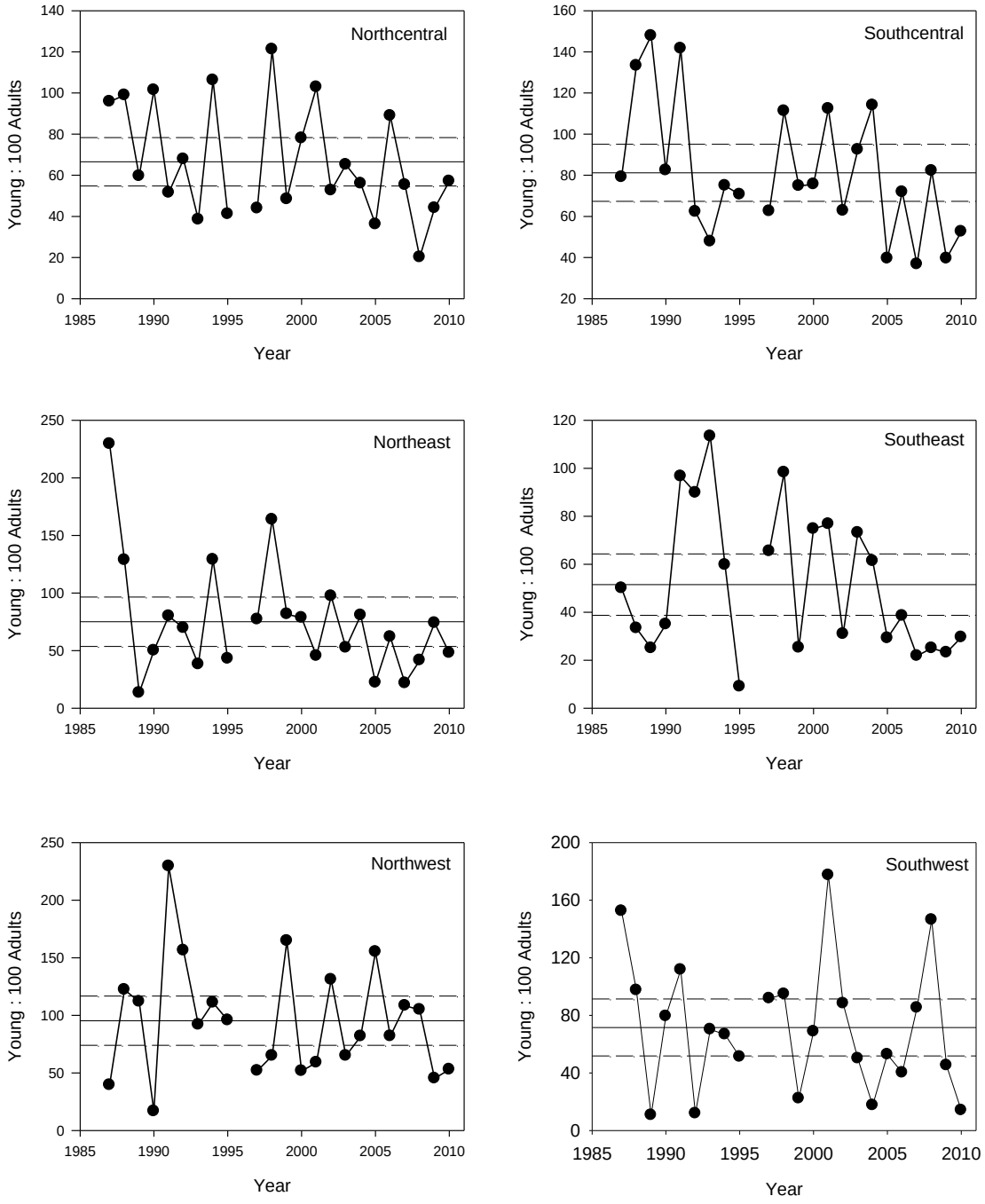

Figure 3. Wild turkey production indices (young :100 adults) for the 6 Kansas turkey management regions, 1986-2010. The long-term mean production index is depicted as a solid line and the accompanying 95% confidence interval is shown by dashed lines.

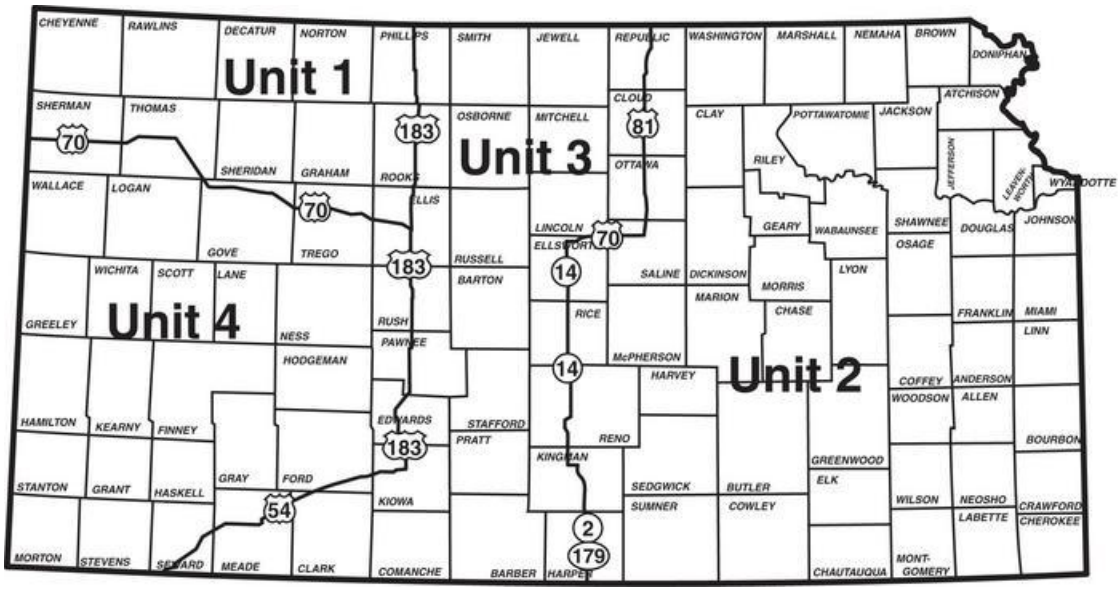

Figure 4. The map depicts the hunting units for Kansas' fall 2009 and spring 2010 turkey seasons. A fall turkey permit could be purchased over-the-counter for Units 1, 2, & 3. Up to 3 additional fall turkey game tags could be purchased and were valid only in Unit 2. There was no fall turkey hunting allowed in Unit 4. A spring turkey permit could be purchased over-the-counter for Units 1, 2, & 3. Three hundred twenty-five spring permits were issued for Unit 4 through a pre-season drawing. An additional spring game tag could be purchased over-the-counter and was valid only in Units 2 & 3.

2010 KENTUCKY WILD TURKEY STATUS REPORT

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POPULATION STATUS

Population numbers and management efforts for wild turkeys in Kentucky have undergone drastic changes over the last 60 years. In 1954 it was estimated that only 850 birds existed statewide, and the great majority of those occurred only in far western Kentucky. Between 1978 and 1997, however, intense restoration efforts resulted in the release of 6,760 birds on 430 sites throughout the state. Today, Kentucky's wild turkey population is estimated at approximately 220,000 birds, with turkeys present in all 120 counties of the Commonwealth.

REPRODUCTION

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has been monitoring turkey reproduction since 1984 by conducting annual brood surveys from July through August. KDFWR personnel and volunteers record survey data during routine travels. Observations include number of hens and poults per brood, number of hens without broods, date and number of adult gobblers. A categorical description of poult size (¼, ½, Grown) also is recorded.

The statewide brood survey for 2009 concluded with 362 observations and broods being seen on 707 occasions; this was down 45.2% from 1,291 in 2008. Overall, 1,346 sightings of hens were recorded, indicating the proportion of hens with at least one poult was 52.5%; down from the 2008 estimate of 70.9%. The average brood size of 3.6 poults in 2009 was considerably lower than the 5.2 poults recorded in 2008. The average number of poults per all hens in 2009 was 1.9 (Figure 1).

Regionally, the western and central portions of the state appeared to exhibit the most reproductive success in 2009 with 2.2 and 1.9 poults per all hens reported in each region (Figures 2 and 3). Estimates for the eastern region of the state indicate approximately 1.6 poults per all hens in 2009. While reproduction in the western region remained fairly constant in 2009, overall poult production decreased significantly following Kentucky's 2008 reproductive boom that coincided with a statewide cicada emergence.

RESTORATION

Restoration efforts for wild turkeys in Kentucky are complete. The last trapping event occurred in 2005 when 36 birds were moved to Fulton County.

PERMIT SALES

In the 2009–10 season, 23,474 spring turkey permits were sold, down 8.0% from 25,503 the previous year. Sales from the 2009–10 spring season included resident and nonresident Spring Permits and Junior Turkey Permits. When Sportsman's licenses, which include all turkey hunting privileges, are included, however, sales from the 2009–10 spring season increased to 73,258; this is up 4.3% from 70,254 in the previous year.

When fall hunting permits are incorporated into sales statistics, the overall number of permits sold during the 2009–10 season was 77,023, which up 3.9% from the 74,104 sold during the 2008–09 season (Figure 4). Permits that allow hunters to take turkeys in the fall include resident and nonresident Fall Turkey Permit, as well as Sportsman's licenses.

HARVEST

Hunters in the Commonwealth of Kentucky have the opportunity for spring and fall harvest of turkeys. In 2010, the statewide spring season ran for 23 days from April 17 through May 9; the youth-only hunt occurred on the weekend of April 3–4. A spring turkey permit is required of residents and nonresidents in addition to a standard hunting license. Legal shotgun, archery and crossbow are permitted throughout the statewide season in spring; shooting hours are one-half hour before sunrise to one-half hour after sunset. Season bag limits for the spring season are 2 male turkeys or those with visible beards; the daily bag limit is one bird.

The 2010 fall archery season for turkeys will occur September 4, 2010 to January 17, 2011. In 2010, a fall shotgun season occurs on October 23–29 and December 4–10. A fall crossbow season for turkeys will run from October 1–17 and November 13–December 31. A fall turkey permit in addition to a standard hunting license is required of those wishing to take birds in the fall. The season fall bag limit is 4 turkeys, only 2 of which may be taken during the shotgun season, regardless of weapon. While the 4 bird limit in the fall is either sex, only 1 male bird may have a beard length of 3 inches or greater.

All harvest data for wild turkeys are collected using a Telecheck Harvest Reporting System via a toll free phone number.

Spring Hunting Season

Kentucky's 2010 spring turkey season resulted in a second consecutive record with the harvest of 36,093 birds over the 25-day youth and statewide season period. More impressive, however, is that this year's harvest is a 24.4% increase from the previous record of 29,007 in 2009 (Figure 5).
The 2010 youth-only season exhibited a 1.8% increase with 1,830 birds taken over the 2-day hunt. This spring, 72.6% (n = 20,524) of successful hunters checked only one bird. In 2009, those numbers were similar with 75.9% (n = 17,718) of spring hunters telechecking only one bird.

Interestingly, hunters this year actually surpassed the 2009 record on day 14 of Kentucky's 23-day statewide season. Unseasonably heavy rain and flooding that occurred over the second and third weekends of the season. In fact, harvest projections indicate that statewide telecheck numbers would have easily exceeded 40,000 birds if not for the historical rain event that occurred the first week of May.

Fall Hunting Season

The 2009–2010 fall turkey season in Kentucky resulted in a total of 5,751 turkeys being telechecked (Figure 6); that is up 13.7% from 5,058 birds taken the previous fall. Males and females accounted for 46.1 and 53.9% of last year's harvest, respectively. Juvenile gobblers constituted 19.5% of male birds taken. As was the case with the 2010 spring harvest, the below average proportion of jakes in the fall harvest appears to be due to the high occurrence of 2-year olds from the reproductive boom that was documented in 2008. Although interest in hunting turkeys with archery continues to grow in Kentucky, harvest by gun accounts for the majority of birds taken in the fall (Figure 7).

REGULATION CHANGES

No regulatory amendments were enacted since the 2009 Southeast Directors Wild Turkey Committee Meeting.

HUNTING ACCIDENTS

Kentucky's 2010 spring turkey season concluded with one hunting-related incident; that non-fatal event was the result of a hunter being fired upon after mistaken for turkeys.

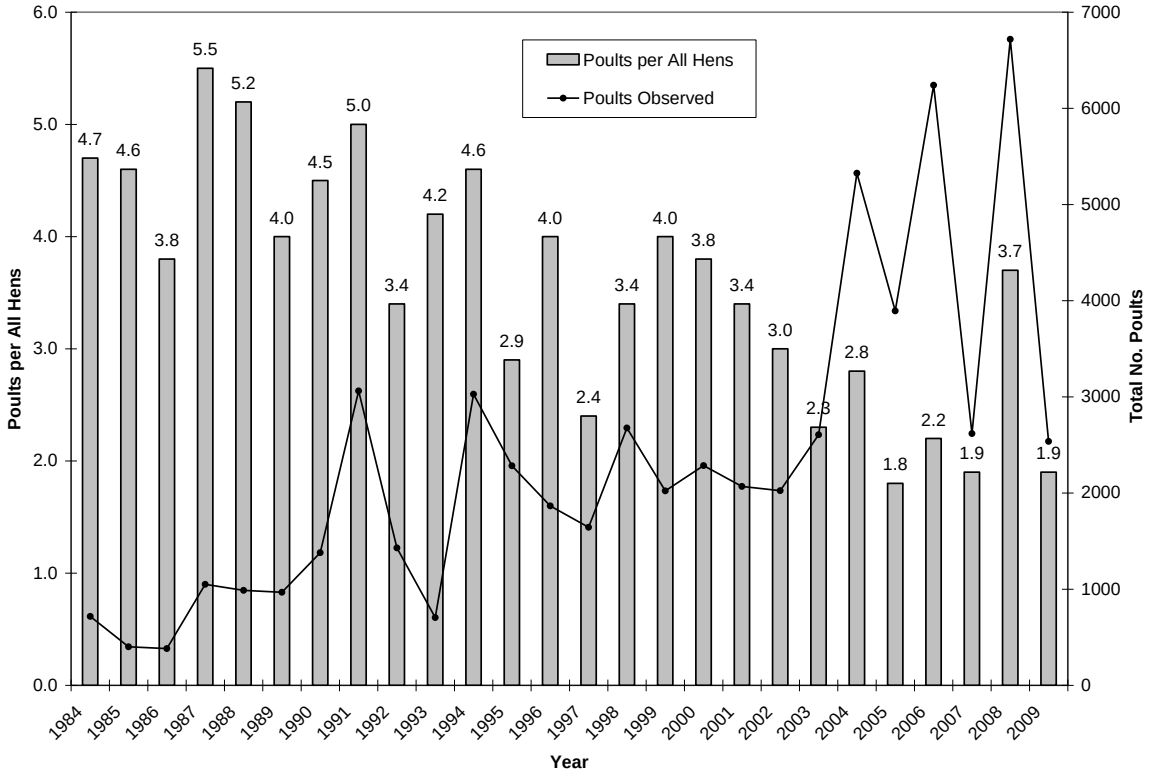

Figure 1. Annual variation in poults per all hens recorded by summer brood surveys in Kentucky, 1984–2009.

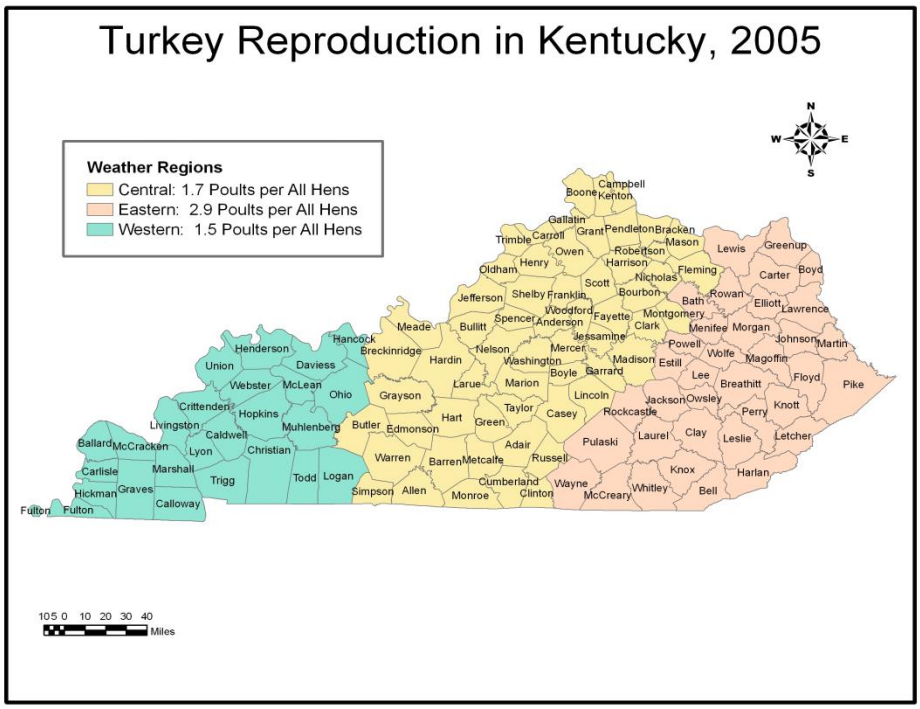

Figure 2. Wild turkey reproduction by weather region in Kentucky, 2009.

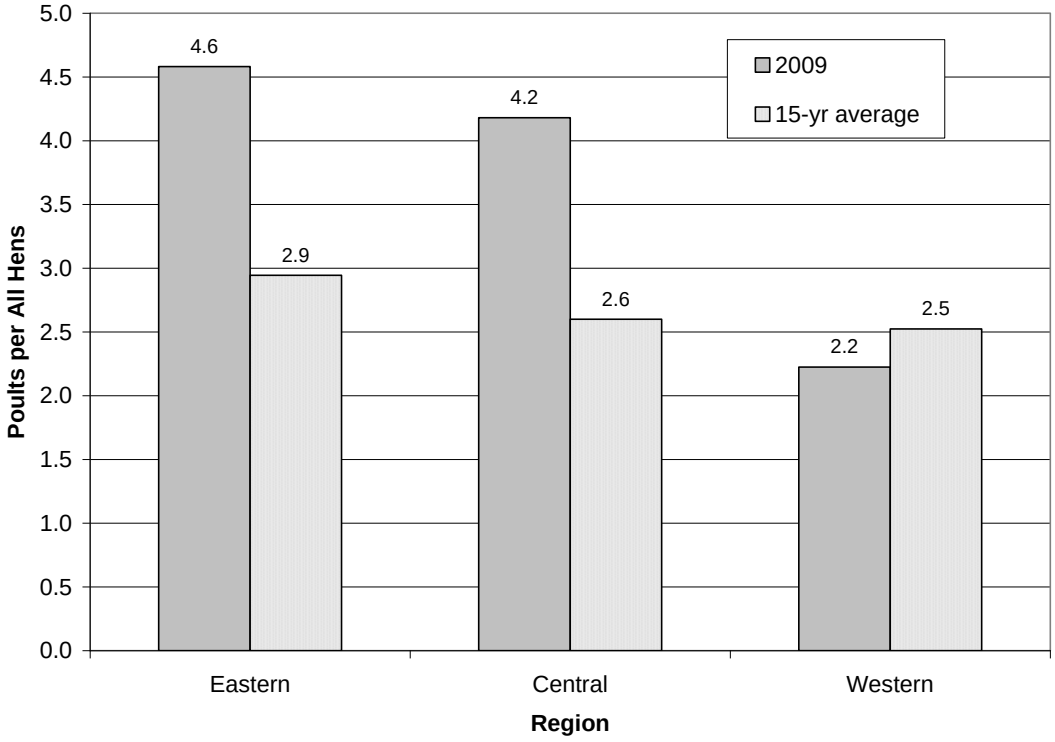

Figure 3. Regional variation in the number of poults per all hens across turkey regions in Kentucky, 2009.

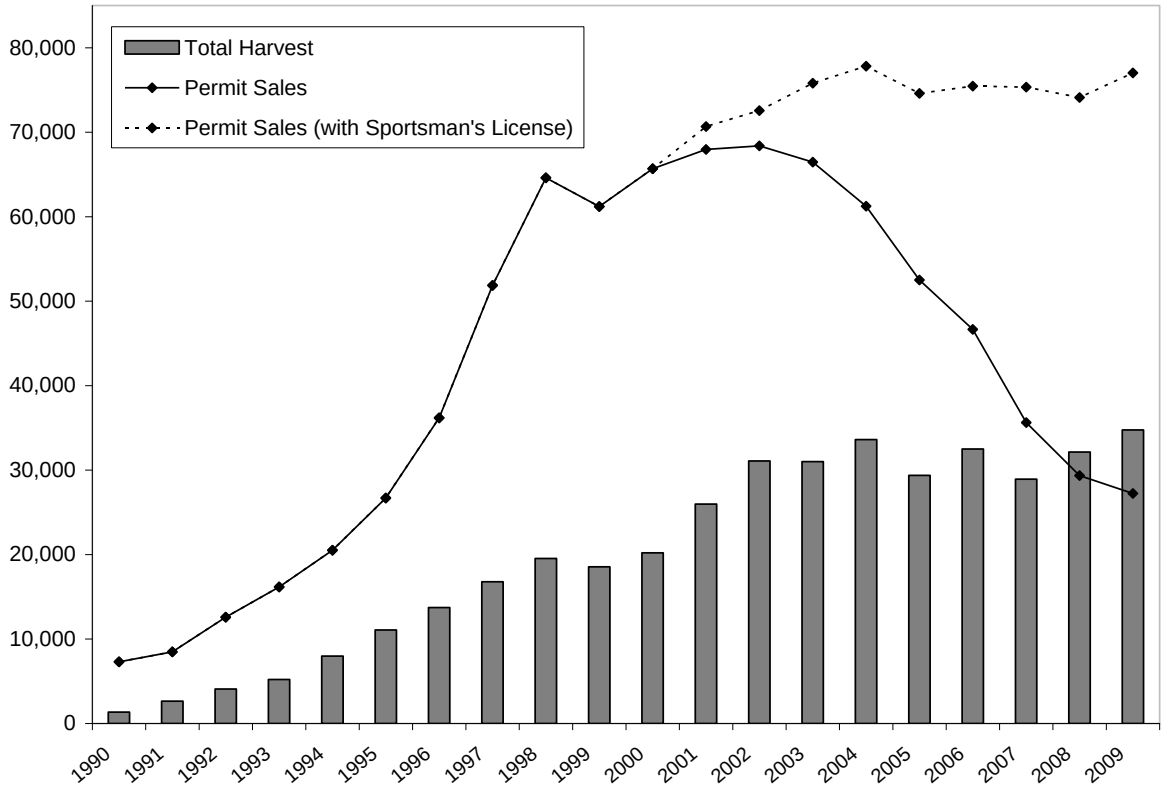

Figure 4. Permits sales and turkeys harvested in Kentucky, 1990–2009.

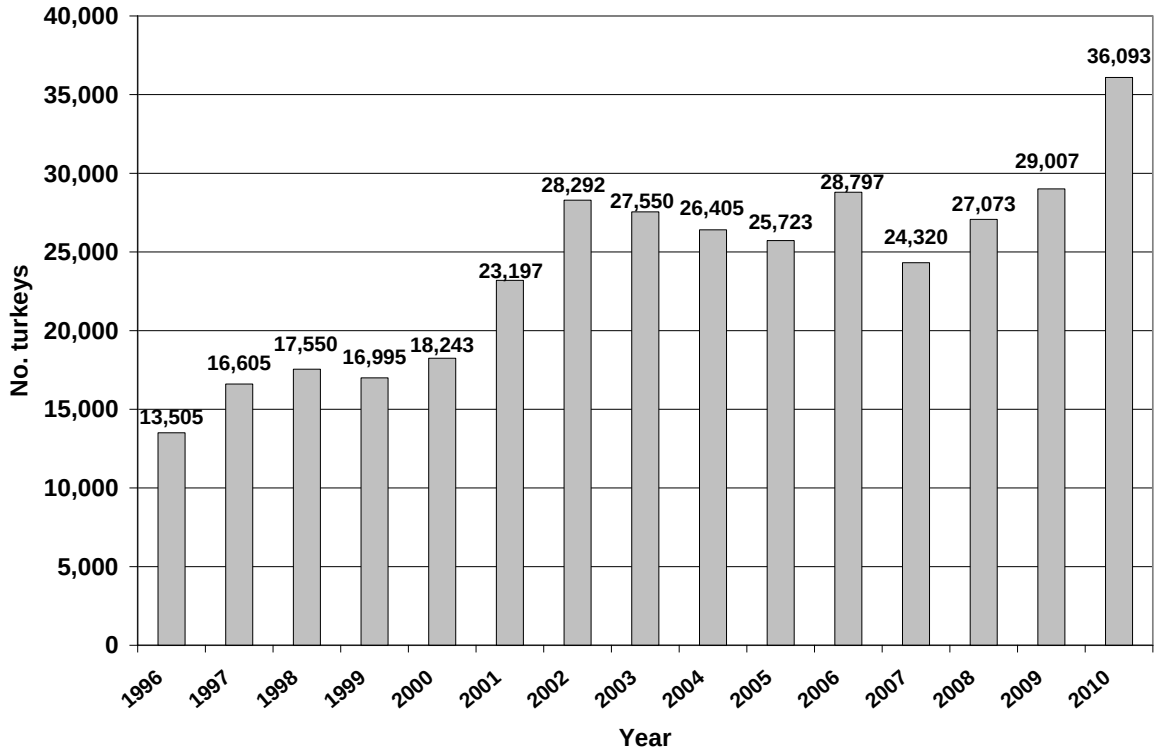

Figure 5. Statewide spring harvest returns for wild turkeys in Kentucky, 1996–2010.

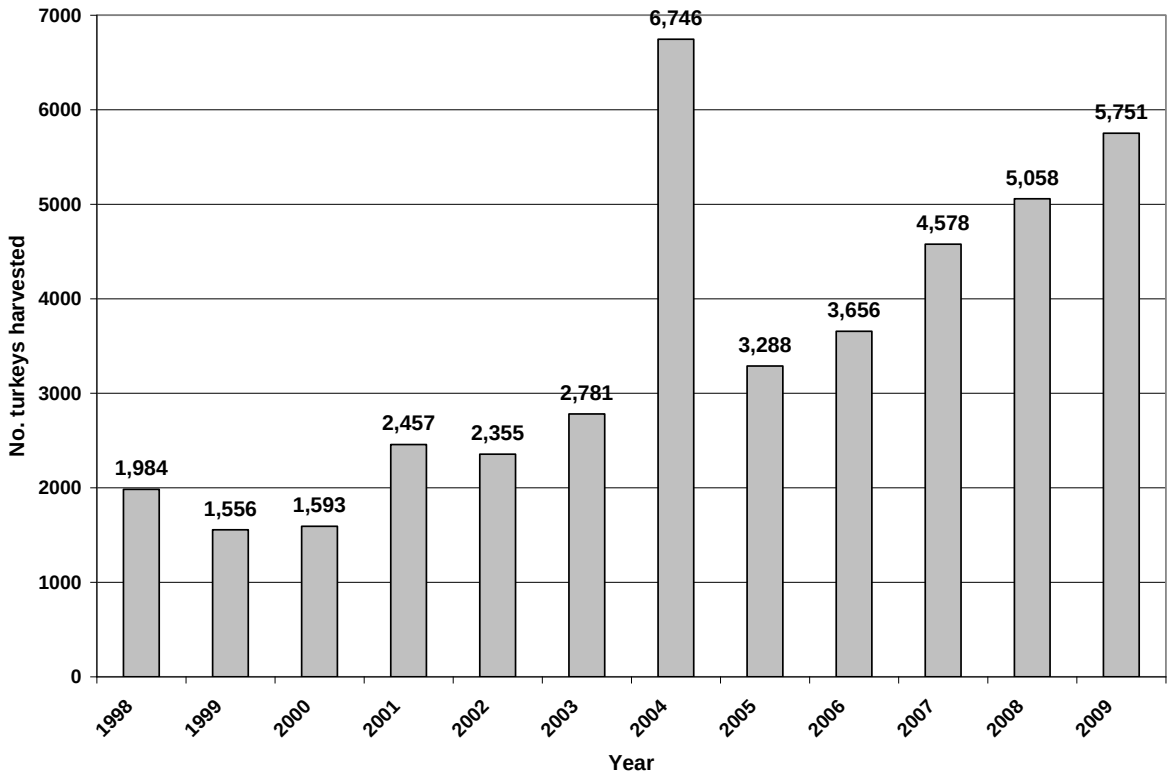

Figure 6. Annual fall harvest returns for wild turkeys in Kentucky, 1998–2009.

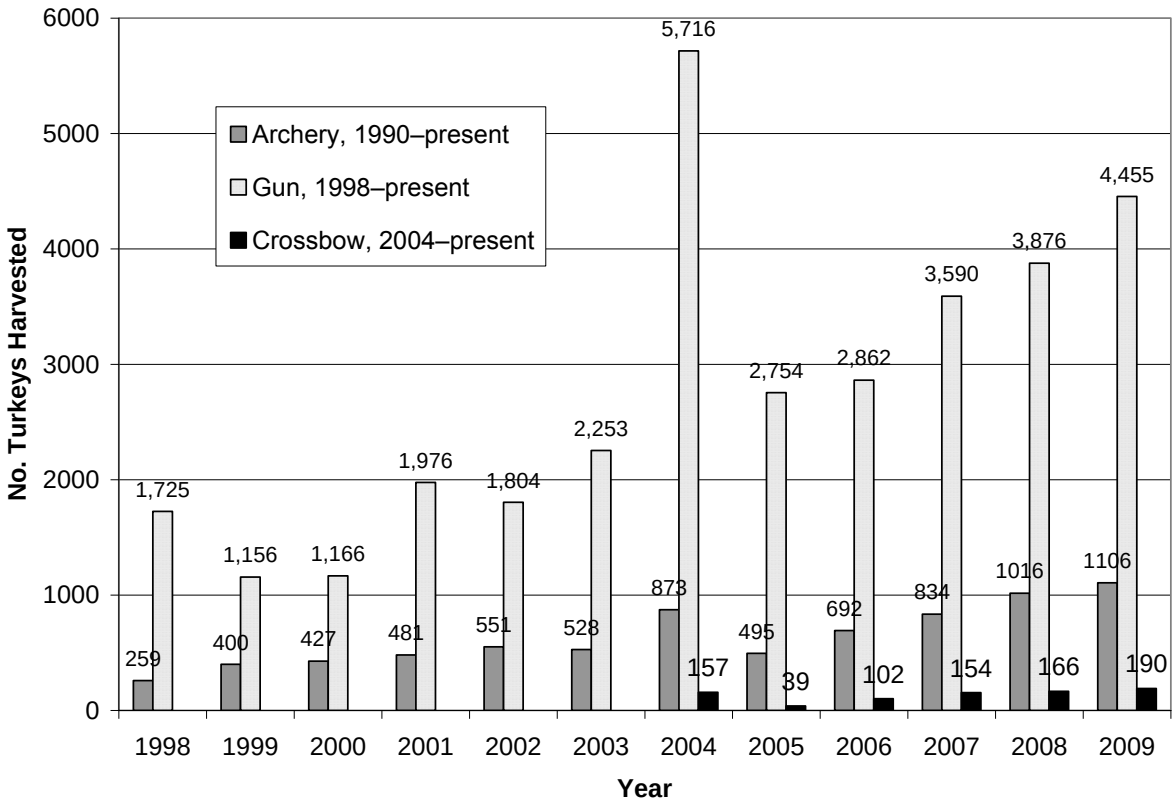

Figure 7. Annual fall harvest returns for wild turkeys in Kentucky by hunting implement, 1998–2009.

Michigan Turkey Report

Minnesota Wild Turkey Status Report

2010 Midwest Deer and Wild Turkey Study Group

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2010 Spring Season

In Minnesota, the spring wild turkey hunting season is designed to regulate harvest and distribute hunting pressure by allocating permits across 77 permit areas (PAs, Figure 1) and 8 time periods using a quota system. Hunters interested in pursuing wild turkeys were required to apply for a permit through a drawing based on a system of preference. Preference is determined by the number of years a valid but unsuccessful application has been submitted since last receiving a permit. Hunters may apply individually or in a group of up to 4 hunters. Successful applicants are notified through mail, and unsuccessful applicants are awarded a preference point. The goal of this system is to provide quality turkey hunting opportunities where turkey populations can sustain harvest.

For the 2010 spring hunting season there were 4 notable regulation changes: (1) all youth age 17 and younger by April 14, 2010 could purchase a youth permit over the counter to hunt any single time period and permit area of their choice; (2) hunters had the option to register their turkey over the phone, using the internet, or at a registration station; (3) the second choice option was eliminated from the application; and (4) the number of permits available for the last 2 time periods (G and H) was increased by 110% from 10,582 (2009) to 22,250 (2010). All surplus licenses remaining after the drawing, were offered over the counter in mid-March on a first-come, first-served basis.

Eight types of hunting licenses were available to resident turkey hunters: (1) general lottery permit in which an applicant or a group of up to 4 hunters applied for a specific PA and time period; (2) landowner permit in which up to 20% of permits for each PA and time period were reserved for landowners or tenants who lived on 40 acres or more of land within the PA; (3) youth permit; (4) archery permit which could be purchased for the last 2 time periods of any PA with 50 or more permits per period; (5) youth archery; (6) surplus permits; (7) youth surplus; and (8) military permit.

During 2010 we received 51,312 applications for 55,982 permits (Table 1, Figure 2). More than 46,500 general lottery, landowner, youth, and surplus permits were issued to hunters, and more than 2,900 additional permits were issued to archers (Table 1). Hunters registered almost 13,500 turkeys, an increase of 10% from 2009 and the highest turkey harvest on record (Table 1, Figure 2). Hunter success averaged 29% (Table 1), which is below the 5-year average of 32%. Hunter success by PA ranged from 13% (PA 459) to 40% (PA 422). Hunter success

varied by license type from 7% (archery) to 31% (youth), 36% (general lottery and landowner), and 42% (surplus). Similar to the 10-year average, hunter success rates were highest during the first 2 time periods. The majority of general lottery (71%), landowner (92%), and youth (79%) permits were issued during time periods A – D, while the majority of surplus permits (98%) were issued during time periods E – H. The 8,490 permits issued to resident and non-resident youth hunters (general lottery, surplus, archery, and mentored) in 2010 was a 69% increase over the 5,024 youth permits issued in 2009. Approximately 10% (1,398) of harvested turkeys were registered using the phone registration system, 12% (1,662) through the internet, and 77% (10,407) at a registration station.

Among turkey management units (TMU), success rates in 2010 were relatively uniform (range 26-32%) except in TMUs A and B, which were slightly lower (23%, Table 2). A plot of success rates in TMUs A and B suggests that populations appear to be fluctuating around a stable mean or declining slowly (Figure 3). Success rates during 2010 declined from the average in all TMUs (Table 2, Figure 3). Although the uniform decline in success rates in 2010 may be an artifact of the unusually large increase in permits issued in 2010 (Figure 2), the trend in hunter success should be carefully monitored into the future.

Overall weather conditions for the 2010 spring turkey hunting season were favorable across much of the turkey range in Minnesota. April and May were relatively dry across much of Minnesota, except for the Red River Valley where major flooding occurred in late March and continued through April (Minnesota Climatology Working Group 2010). April temperatures were above average and May temperatures were near historic averages (Minnesota Climatology Working Group 2010). Although favorable weather generally contributes to increased harvest, the continued increase in harvest can be partially attributed to the increase in the number of permits available (i.e., 32% overall increase in the number of permits available with the majority of increase in time Periods G and H and a 10% increase in registered harvest) from 2009, 1 new PA open to hunting (PA 247), and youth hunters being able to purchase permits over the counter. Increased permits and permit areas resulted in more opportunities for hunters to harvest turkeys.

2011 Spring Season

At the time of this report the 2011 spring season (dates and permits) have not been set.

2009 Fall Season

Minnesota's fall turkey hunting season is managed with a quota system similar to the spring turkey hunting season. Permits are allocated across 67 PAs (Figure 4) during 2, 5-day time periods in PAs 156 - 467 and 1, 30-day time period in PA 601.

Three types of permits were available to hunters: (1) general lottery permits in which applicants or parties of up to 4 hunters applied for specific PA and time period, (2) landowner permits in which up to 20% of permits for each PA and time period were reserved for landowners or tenants who lived on 40 acres or more of land within the PA, and (3) surplus permits were offered in under-subscribed permit areas and time periods to hunters who applied in the lottery, but were unsuccessful. General lottery and landowner permits were made available based on a system of preference, which was determined by the number of years applicants submitted a valid, but unsuccessful application since last receiving a permit. If available, surplus

permits could be purchased on a first-come, first-served basis. Permit holders were allowed to harvest 1 turkey of either sex during the fall season.

Fall turkey hunting opportunity was increased significantly since 2007 with the addition of 4,840 available permits (108% increase) and 35 new permit areas. In 2009, over 5,000 permits were issued, and hunters registered 1,163 turkeys, similar to the 2008 season (Table 3, Figure 5). Hunter success averaged 23% but varied among PAs from 0% in PAs 156, 183, 235, 450, 457, and 458 to 46% in PAs 244 and 454. The majority of permits issued were general lottery (94%), followed by landowner permits (4%), and surplus (2%).

In response to wild turkey range expansion, the number of PAs open to fall turkey hunting was increased by 35 since 2007. For the second year a 30-day season was held in PA 601 to increase hunter participation and turkey harvest in response to an increasing number of nuisance complaints in the metropolitan area. The addition of 800 permits in PA 601 plus 35 new PAs accounted for 38% of the registered harvest since 2007. Expanded permit allocation in traditional PAs accounted for the remainder of the increase in the number of hunters and registered harvest. Hunter success has remained stable (range 22-24%) since 2004 (Table 3).

2010 Fall Season

In 2010, the fall turkey season will be expanded from 2, 5-day time periods to 1, 30-day season (October 2 – 31). Sixty seven PAs will be open to fall turkey hunting, which is the same as the 2009 fall season. Available permits will increase to 10,430 an increase of 1,100 (12%) from the 2009 season, with the majority of the increase (1,000 permits) occurring in PA 601 metropolitan Minneapolis/St. Paul area.

Research

Wild Turkey Diet Selection and Body Condition Research Project

Abstract – Dunton et al. (2010)

The purpose of this study was to evaluate winter diet selection and body condition of eastern wild turkeys (*Meleagris gallopavo silvestris)* in agricultural and forested areas on the northern fringe of their range in Minnesota. We collected 15 turkeys in forested habitat (7 in 2009 and 8 in 2010) and 55 turkeys in agricultural habitat (24 in 2009 and 31 in 2010). Crop contents of forested turkeys consisted of a mixture of high energy (e.g., acorns) and low energy (e.g., grass, leaf litter, sensitive fern) food items, while crop contents of turkeys located in agricultural habitats consisted primarily of high energy (corn) food items. In 2009, adult females in forested habitat had 32% less body weight, 72% less body fat, and were assigned to lower body condition classes than adult females in agricultural habitat. In 2010, adult females in forested habitat had 24% less body weight, 49% less body fat, and most birds were assigned to a lower body condition class than adult females in agricultural habitat. Based on weight loss, we estimated that adult hens foraging in agricultural habitats satisfied 95% and 98% of their energy needs during winter from food intake during 2009 and 2010, respectively. In contrast, food intake satisfied only an estimated 58% and 73% of the energy needs of adult hens foraging in forested habitats during 2009 and 2010, respectively. If consumption of fat reserves continued at the same rate in forested habitats, we projected that fat reserves would be depleted after 62 days

during 2009 (i.e., by 1 February) and after 97 days during 2010 (i.e., by 7 March). Further range expansion of wild turkeys in Minnesota's northern forests may be limited by availability of high energy food sources during winter, which are generally associated with agricultural practices.

Spring Turkey Hunter Survey

A spring turkey hunter survey was conducted following the 2010 spring season. A random sample of hunters was selected from 5 southeastern PAs (344, 345, 346, 348, and 349; Figure 1). The objectives of this survey were to estimate hunter satisfaction and factors such as interference rates between hunters and relative ease of access to hunting land that may influence hunter satisfaction. In addition, a web-based survey tool was evaluated. To evaluate the difference in response rate, cost, and overall feasibility of using a web-based survey, hunters were randomly assigned to 1 of 3 treatment groups based on their method of response. The first group received a post card with a website address and a unique survey identification number and was asked to go to the survey website. Respondents entered their survey id number, which was verified to prevent multiple responses by the same respondent or any response by an unknown respondent. The second group received a postage-paid paper mailback survey which could be completed and returned via U.S. mail. The third group received a post card with a website address and unique survey identification number on the first mailing. Non-respondents received a postage-paid mailback survey for the second mailing. At the time of this report, data were still being collected and the survey report was not complete. We plan to conduct a follow up survey of non-respondents to determine reasons for not using the web-based survey tool (e.g., didn't have a computer, technical problem finding the survey site, etc).

Fall Population Survey

Changes in distribution and abundance of wild turkeys (*Meleagris gallopavo*) in Minnesota are monitored using a mail survey of white-tailed deer (*Odocoileus virginianus*) hunters in the state's wild turkey range and potential range. This survey is scheduled to be conducted following the 2010 regular firearm white-tailed deer season. The purpose of the survey is to calculate a wild turkey population index based on the proportion of deer hunters observing wild turkeys (HOWT) in 16 turkey management units (TMU) and their subset PAs, describe relative changes (increase, decrease, none) in the HOWT index compared to previous surveys, describe changes in wild turkey distribution, and estimate the average finite rate of population change over the last 4 surveys.

Literature Cited

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Dunton, E., and J. Snyders. 2009. Fall wild turkey population survey, 2008. Minnesota Department of Natural Resources, St. Paul, MN, Agency Report.

Minnesota Climatology Working Group. 2010. Climate journal. http://climate.umn.edu/ Accessed 8 July 2010.

Table 1. Spring applicants, permits available and issued, and registered harvest from 1978 – 2010 for all spring wild turkey hunting seasons, Minnesota.

		Permits				
Year	Applicants	Available	Issued	Issued (%)	Registered harvest	Success (%)[a]
1978	10,740	420	411	97.9	94	22.9
1979	11,116	840	827	98.5	116	14.0
1980	9,613	1,200	1,191	99.3	98	8.2
1981	8,398	1,500	1,437	95.8	113	7.9
1982	7,223	2,000	1,992	99.6	106	5.3
1983	8,153	2,100	2,079	99.0	116	5.6
1984	7,123	3,000	2,837	94.6	178	6.3
1985	5,662	2,750	2,449	89.1	323	13.2
1986	5,715	2,500	2,251	90.0	333	14.8
1987	6,361	2,700	2,520	93.3	520	20.6
1988	8,402	3,000	2,994	99.8	674	22.5
1989	13,007	4,000	3,821	95.5	930	24.3
1990	14,326	6,600	6,126	92.8	1,709	27.9
1991	15,918	9,170	8,607	93.9	1,724	20.0
1992	16,401	9,310	9,051	97.2	1,691	18.7
1993	17,800	9,625	9,265	96.3	2,082	22.5
1994	19,853	9,940	9,479	95.4	1,975	20.8
1995	21,345	9,975	9,550	95.7	2,339	24.5
1996	23,757	12,131	10,983	90.5	2,841	25.9
1997	25,958	12,530	11,610	92.7	3,302	28.4
1998	29,727	14,035	13,229	94.3	4,361	33.0
1999	39,957	18,360	16,387	89.3	5,132	31.3
2000	42,022	20,160	18,661	92.6	6,154	33.0
2001	41,048	22,936	21,404	93.3	6,383	29.8
2002	42,415	24,136	22,607	93.7	6,516	28.8
2003	44,415	25,016	22,770	91.0	7,666	33.7
2004	48,059	27,600	25,261	91.5	8,434	33.4
2005	49,181	31,748	27,638	87.1	7,800	28.2
2006	45,704	32,624	27,876	85.4	8,241	29.6
2007[b]	52,566	33,976	28,320	83.4	9,412	33.2
2008[b]	51,000	37,992	31,942	84.1	10,994	34.4
2009[b]	57,692	42,328	36,193	85.5	12,210	33.7
2010[b]	51,312	55,982	46,548[c]	83.0	13,467	29.0

[a] Success rates not adjusted for non-participation
[b] Youth hunt data included
[c] 2,910 permits were issued to archery hunters and are not included in this figure.

Table 2. Permits available and issued, registered harvest, hunter success (2010 and mean), and mean finite rate of population change (Dunton and Snyders 2009) by Turkey Management Unit (TMU) for the 2010 spring wild turkey season, Minnesota.

	Permits		2010		Mean success[e]		Mean finite rate of change[f]	
TMU[a,b]	Available	Issued[d]	Registered harvest[d]	Success (%)	%	*n*	λ	99% CI[g]
A	9,350	6,083	1,405	23	24	9	0.99*	(0.94, 1.04)
B	1,250	1,001	229	23	27	11	0.98	(0.89, 1.07)
C	7,860	6,490	1,945	30	32	9	0.99	(0.91, 1.09)
D	5,850	5,398	1,632	30	36	9	1.06*	(1.04, 1.07)
E	2,640	2,518	704	28	33	2	1.15*	(1.09, 1.20)
F	6,590	5,161	1,543	30	35	8	1.03	(0.96, 1.12)
G	1,840	1,205	310	26	33	5	1.07*	(1.02, 1.11)
H	4,260	3,789	1,151	30	34	6	1.03	(0.95, 1.13)
I	800	562	181	32	37	9	1.08	(0.99, 1.19)
J	3,050	2,941	881	30	40	1	1.11	(0.96, 1.30)
K	3,990	4,253	1,313	31	43	3	1.09	(0.99, 1.20)
L	3,110	3,073	885	29	43	3	1.15	(0.91, 1.45)
M	892	345	107	31	36	2	1.18	(1.01, 1.37)
N	4,140	3,495	1,102	32	39	1	1.18	(0.93, 1.51)
O	360	137	38	28	48	1	1.17	(0.70, 1.97)
P[c]	-	-	-	-	-	-	1.12	-

[a] TMU A = permits areas (345, 346, 348, 349), TMU B = permit area (344), TMU C = permit areas (341, 342, 343, 347), TMU D = permit areas (227, 235. 236, 338, 601), TMU E = permit areas (152, 156, 157, 159, 183, 225), TMU F = permit areas (339, 461, 462, 464, 465, 466, 467), TMU G = permit areas (446, 447, 448, 449, 450, 451, 454, 456, 457, 458, 459), TMU H = permit areas (431, 433, 435, 440, 442, 443), TMU I = permit areas (425, 426, 427, 428), TMU J = permit areas (154, 221, 222, 223, 224, 242, 247, 249), TMU K = permit areas (215, 218, 219, 229, 417), TMU L = permit areas (213, 239, 412, 416), TMU M = permit areas (420, 421, 422, 423, 424), TMU N = permit areas (214, 240, 241, 243, 244, 245, 246, 248), TMU O = permit areas (201, 208, 209, 210, 251, 256, 257, 260, 261, 262, 263, 264, 265, 266, 267, 268, 298), TMU P = permit areas (170, 172, 174, 181, 182, 184, 197, 199, 287).

[b] Not all permit areas in a TMU are open to spring hunting

[c] TMU P currently does not have any permit areas open for spring hunting

[d] Total excludes 97 permits issued and 41 turkeys registered from the Camp Ripley disabled veterans hunt

[e] Mean success rate based on consecutive number of years hunting in permit area since a boundary change occurred or area was opened to hunting. Mean success rate based on areas open to hunting, which may not represent all permit areas within a TMU.

[f] Mean finite rate of change based on fall wild turkey population survey data (1999-2008 [*n* = 4 surveys]), TMU P based on 2 surveys.

[g] 85% family of confidence intervals (type I error rate controlled at $\alpha = 0.15$).

*Desired level of precision achieved

Table 3. Permits available and issued, applicants, registered harvest, and hunter success rates for fall wild turkey hunting seasons 1990 – 2009, Minnesota.

Year	Permits available	Applicants	Permits issued	Registered harvest	Hunter success (%)[a]
1990	1,000	4,522	951	326	34
1991	2,200	2,990	2,020	552	27
1992	2,200	2,782	2,028	588	29
1993	2,400	3,186	2,094	605	29
1994	2,500	3,124	2,106	601	29
1995	2,500	3,685	2,125	648	30
1996	2,500	4,453	2,289	685	30
1997	2,580	4,574	2,378	698	29
1998	2,710	4,526	2,483	828	33
1999	2,890	5,354	2,644	865	33
2000	3,090	5,263	2,484	735	30
2001	2,870	4,501	2,262	629	28
2002	3,790	5,180	2,945	594	20
2003	3,870	5,264	2,977	889	30
2004	4,380	5,878	3,277	758	23
2005	4,410	4,542	2,978	681	23
2006	4,290	4,167	2,802	618	22
2007	4,490	4,464	2,837	695	24
2008	7,560	5,834	4,981	1,187	24
2009	9,330	7,738	5,019	1,163	23

[a] Success rates not adjusted for non-participation.

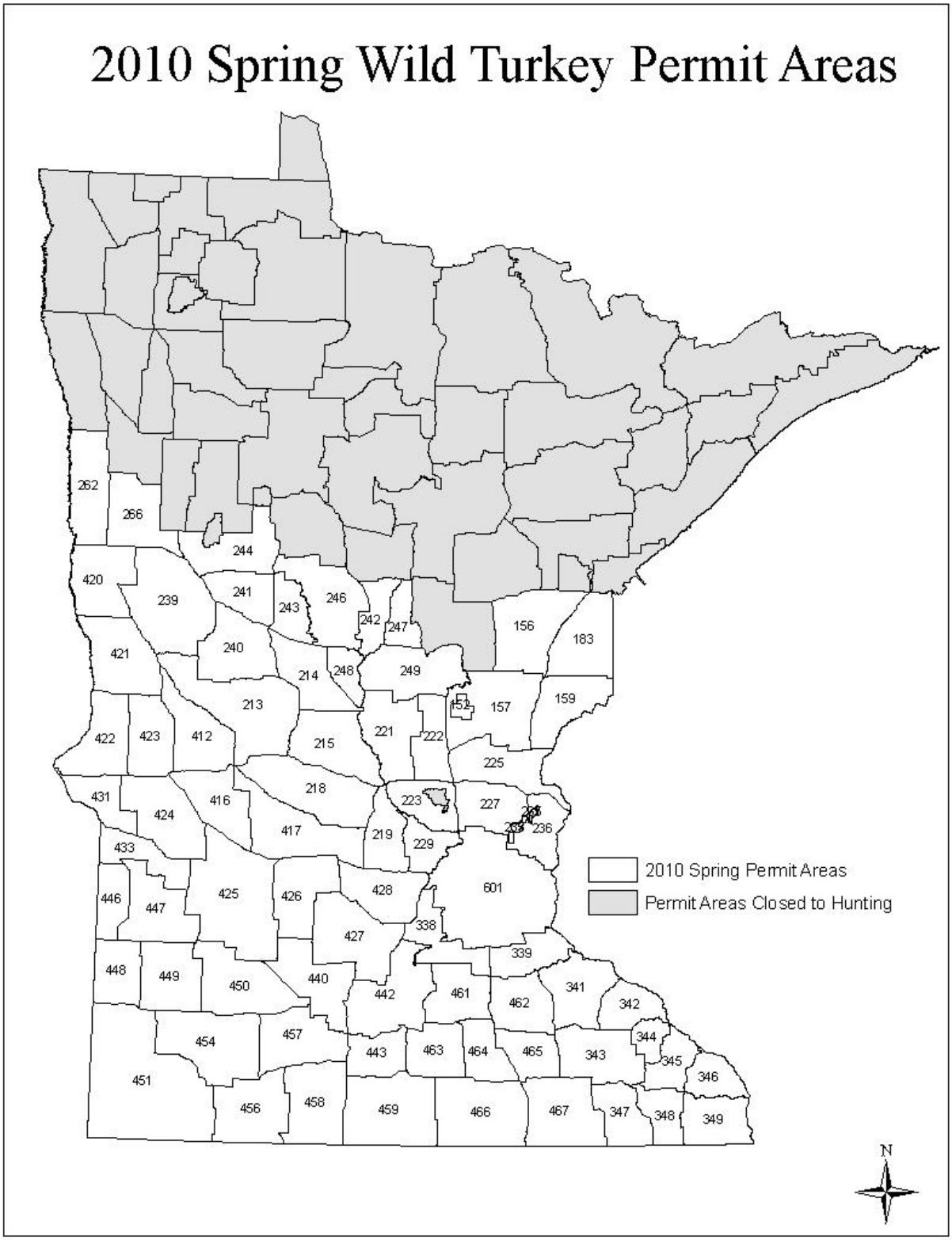

Fig. 1. Permit areas open for hunting during the 2010 spring turkey hunting season, Minnesota.

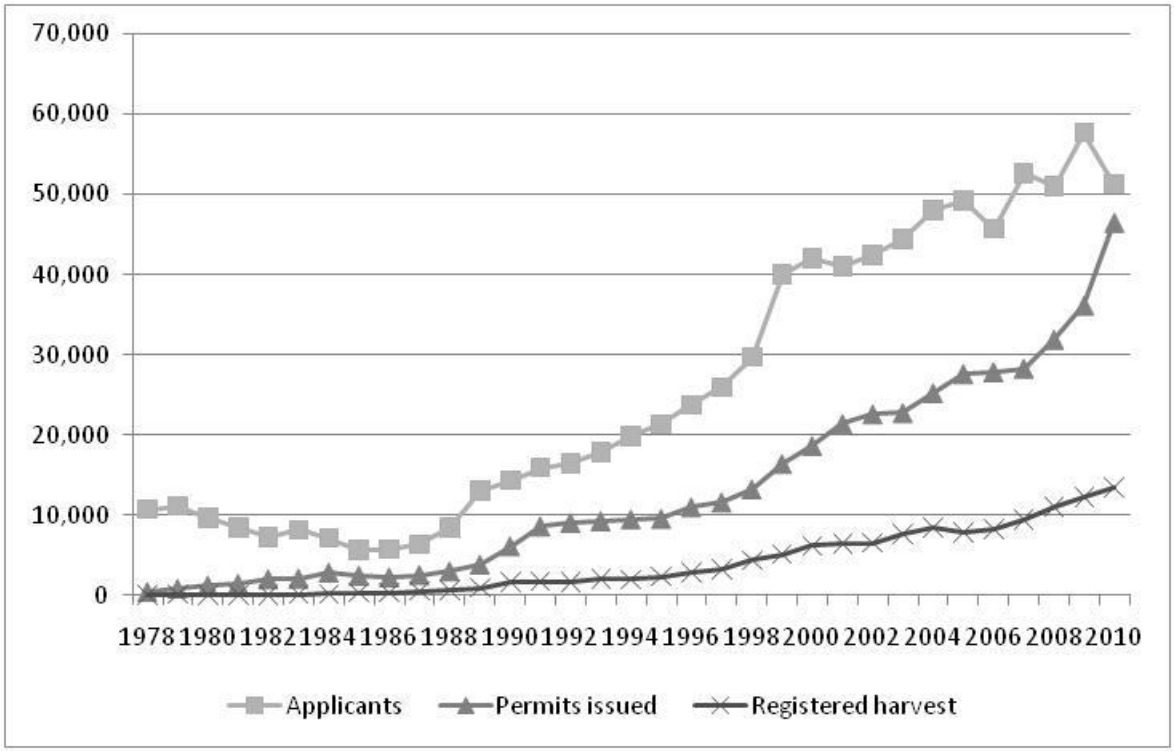

Fig. 2. Number of applicants, permits issued, and registered harvest for the spring wild turkey seasons 1978-2010, Minnesota.

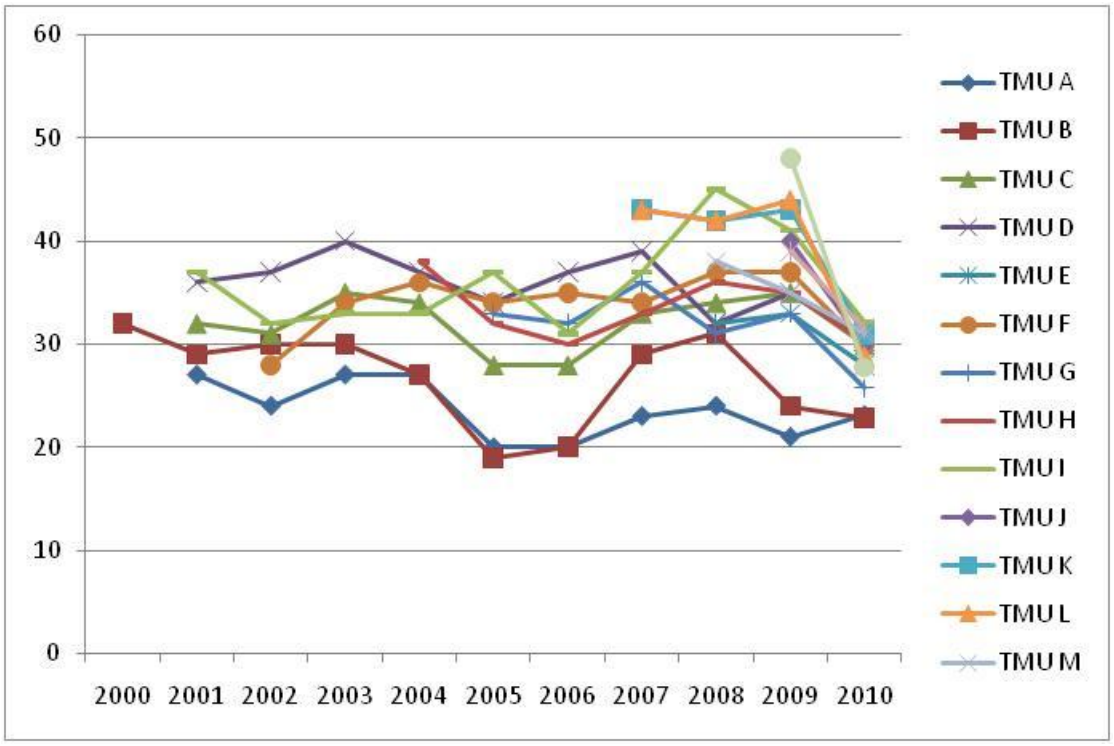

Fig. 3. Mean success rate (%) for turkey management units (TMUs) based on cumulative permit area success rates since a boundary change occurred or permit areas opened for hunting, Minnesota.

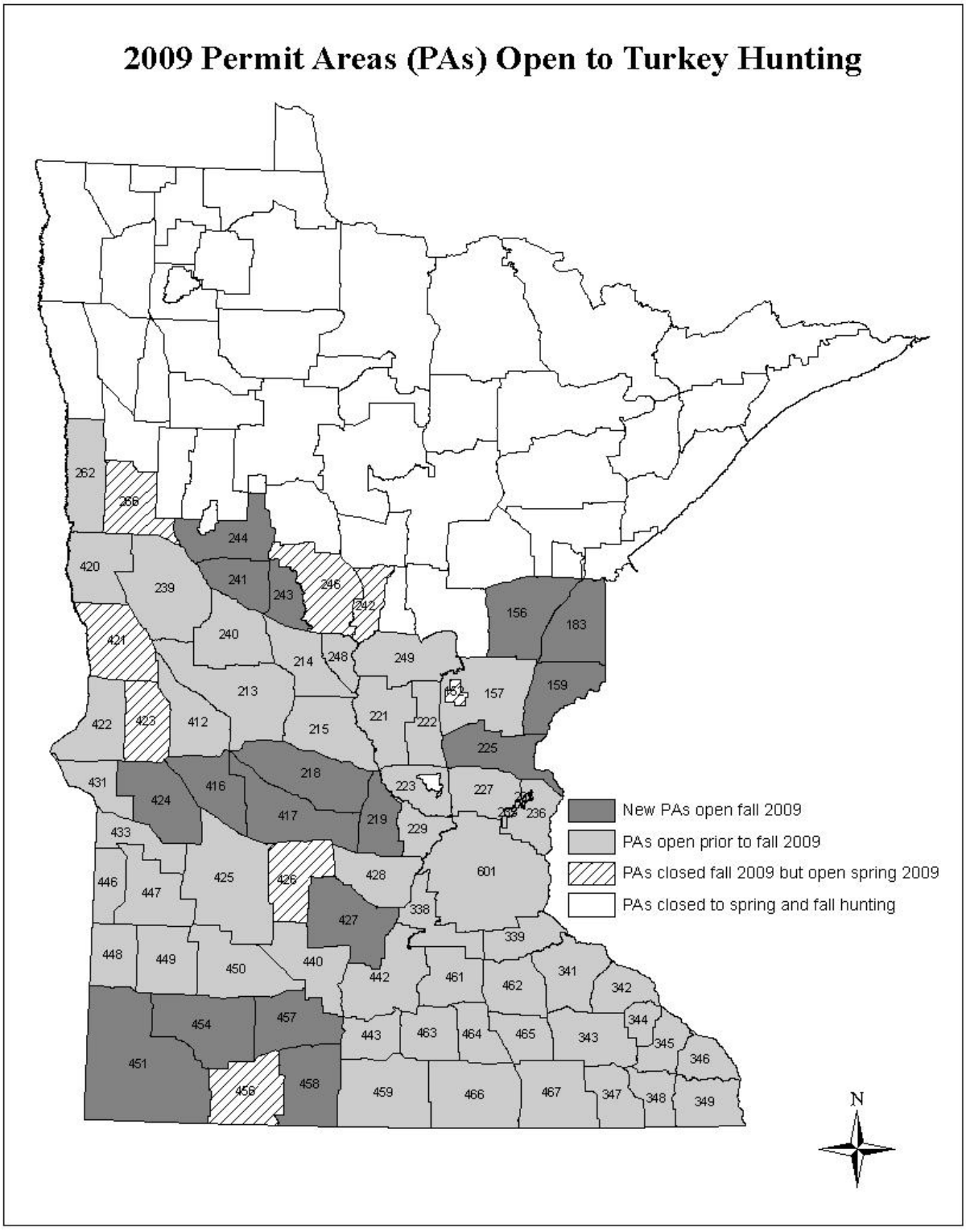

Fig. 4. Permit Areas (PAs) open to hunting for the 2009 fall turkey hunting season, Minnesota.

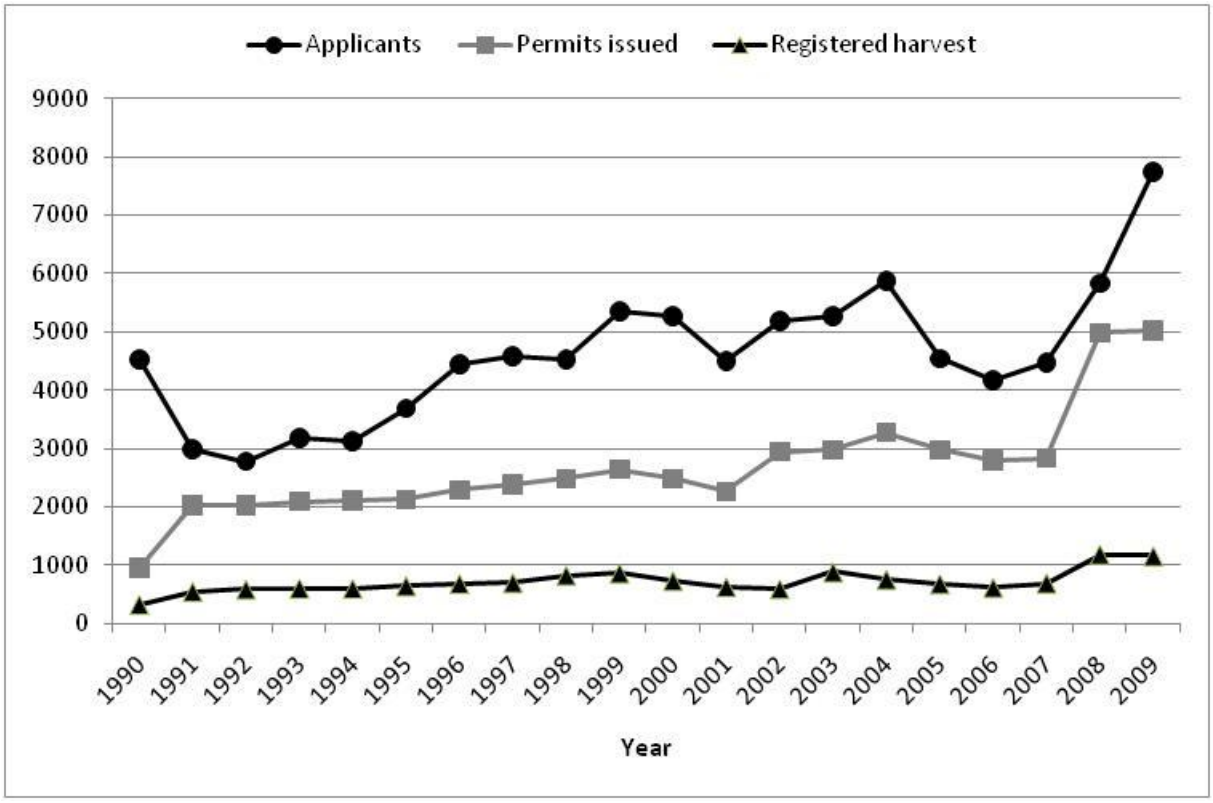

Fig. 5. Number of applicants, permits issued, and registered harvest for fall wild turkey seasons 1990 – 2009, Minnesota.

MISSOURI WILDLIFE HARVEST AND POPULATION STATUS REPORT

WILD TURKEY – 2010

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2010 Spring Turkey Season

Hunters harvested 42,253 turkeys during the 21-day regular spring turkey season, which began on April 19 and concluded on May 9. This year's harvest represents a 1% increase from last year's regular season harvest of 41,830 turkeys. Juvenile male turkeys comprised 21% of the harvest, which is consistent with the previous 5-year average of 21%, and just slightly below the previous 10-year average of 22%. Counties with the highest harvest during the regular season were Franklin, Texas, and St. Clair, where 872, 755, and 701 turkeys were harvested, respectively. Counties in which hunters harvested more than 500 turkeys included Benton, Bollinger, Callaway, Cape Girardeau, Cedar, Douglas, Franklin, Gasconade, Greene, Henry, Howell, Jefferson, Johnson, Laclede, Macon, Osage, Perry, Pettis, Polk, St. Clair, Ste. Genevieve, Texas, Webster, and Wright. Only two of these counties are located north of the Missouri River, compared to five years ago when this region had 23 counties in the 500-or-better category, and three years ago when there were still seven. Regional harvest totals during the regular spring season were 6,212 in the Missouri Department of Conservation (MDC) Central region, 6,532 in the Southwest region, 5,879 in the Northwest region, 5,303 in the Ozark region, 5,525 in the Northeast region, 5,089 in the Kansas City region, 4,377 in the Southeast region, and 3,336 in the St. Louis region.

During the youth spring turkey season which took place on the weekend of April 10-11, youth hunters harvested 3,941 turkeys. This harvest total is a 37% increase from last year's youth harvest and represents the highest harvest during the youth season since its inception in 2001. The total spring harvest, including both the regular and youth seasons, was 46,194 birds. With youth season and regular season harvests combined, just four counties north of the Missouri River had harvests of greater than 500 turkeys, whereas hunters harvested more than 500 turkeys in 25 counties south of the Missouri River (Figure 1). This year's total harvest represents a 3% increase from 2009's total harvest and is the first increase in total spring harvest since 2004 (Figure 2, Table 1).

Spring turkey hunting in Missouri is a substantial recreational activity with more than 500,000 days spent afield annually during the youth and regular seasons. Total permit sales this spring (105,501; excluding resident landowner permits), however, decreased by 6% from last year's spring permit sales total of 112,579 (Figure 2, Table 1). Spring turkey permits sales during 2010 included 79,951 resident permits, 6,523 nonresident permits, 18,490 resident youth permits, and 537 nonresident youth permits. An additional 42,668 permits were distributed to resident landowners, which brought the total number of spring permits to 148,169.

2010 Fall Firearms Turkey Season

This year's fall firearms turkey harvest total of 5,928 represents a substantial decline from last year's harvest of over 8,000 turkeys. The majority of this year's harvest occurred south of the Missouri River (Figure 3); counties where hunters harvested more than 100 turkeys included Bollinger, Cape Girardeau, Cedar, Franklin, Greene, Laclede, Perry, Polk, St. Francois, St. Genevieve, Texas, Webster, and Wright. The top three counties in harvest were Greene, Franklin, and Webster, where 199, 157, and 154 turkeys were harvested, respectively. Although the decrease in this year's harvest was substantial, it was not surprising considering that fall firearms turkey permit sales declined by nearly 21% from 2009 (Figure 4, Table 2). Of the permits sold in 2010, 13,533 were purchased by Missouri residents and 203 by nonresidents; an additional 59,846 landowner permits were distributed this year. Fall firearms turkey hunting in Missouri has been declining in popularity since the late 1980's when over 50,000 permits were sold and over 28,000 turkeys were harvested (Figure 4, Table 2). As would be expected, fall firearms harvest has declined over the past two decades, largely in response to declining permit sales.

A number of factors are likely playing a role in the decline in participation during the fall firearms turkey season. Since the 1980's, after Missouri's wild turkey population reached its peak in numbers in many regions of the state, the poult-to-hen ratios observed in the state's brood survey have indicated declines in reproduction. This trend is not surprising, however, considering that Missouri's turkey population could not expand indefinitely. Over time, the population has experienced density-dependent effects, which have affected reproduction and subsequently changed the dynamics of the population. In addition to these effects, inclement weather during the nesting and brood-rearing season in five of the last six years has reduced poult-to-hen ratios substantially (Figure 5). This combination of density-dependent effects and wet and cold spring and early summer weather has reduced the number of wild turkeys that hunters are accustomed to seeing in many parts of the state. Reduced turkey sightings may be discouraging some hunters from pursuing turkeys in the fall. Other hunters, recognizing the low nest success and poult survival of the past several years may simply be waiting until next spring to turkey hunt.

2009-2010 Fall Archery Turkey Season

Hunters harvested 3,263 turkeys during the 2009-2010 fall archery turkey season, which began on September 15, 2009 and concluded on January 15, 2010. This harvest total is a 31% increase from the previous fall archery harvest and represents the highest harvest during the fall archery season since its inception in 1975. Unlike the fall firearms turkey harvest, which has steadily declined since the late 1980's (Figure 4), the fall archery harvest has displayed an increasing trend since the season began in 1975 (Figure 6). As a result, the proportion of fall turkey harvest occurring during the archery season has increased substantially in the past decade. Specifically, the archery harvest comprised just 5% of the total fall harvest in 2000; by 2009, the archery harvest represented nearly 30% of the total fall harvest.

2010 Turkey Production

The 2010 statewide poult-to-hen ratio (P/H ratio) of 1.13 was 2% lower than last year's ratio, and 6%, 36%, and 59% lower than the 5, 10, and 20-year statewide averages, respectively (Table 3). Across turkey production regions, P/H ratios ranged from a low of 1.03 in the Ozark Border to a high of 2.29 in the Mississippi Lowlands (Figure 7, Table 3). On a statewide basis, the P/H ratio peaked at 4.6 in 1971 and has steadily declined since the mid-1980's, other than a slight increase that occurred during the late 1990's (Figure 5).

Declines in the P/H ratio that have occurred during the past two decades are the result of multiple factors. It is likely that Missouri's wild turkey population has experienced density-dependent reductions in reproduction during this time period; however, inclement weather during the nesting and brood-rearing seasons has likely contributed to the relatively poor P/H ratios observed in the past several years. Although a statewide ratio of 1.55 occurred in 2006, the P/H ratio has failed to exceed 1.2 during the last four years. It is unlikely that the high P/H ratios observed in the 1970's and 1980's (Figure 5) will be observed again on a statewide basis, but improved conditions (warm and dry weather) during the nesting and brood-rearing seasons should lead to increases in poult production and Missouri's wild turkey population.

Population Index

Since 1983, volunteer archers have recorded the number of wild turkeys, deer, and furbearers observed while bow hunting during October and November. On a statewide basis, the number of wild turkey sightings per 1,000 hours of bow hunting in 2009 was 418, ranging from a low of 318 in the Mississippi Lowlands region to a high of 650 in the Northwest region. The statewide average of 418 represents an 11% increase from the 2008 average, but is 19% and 40% below the previous 5-year and 10-year averages, respectively.

Restoration

Turkey translocations have not occurred since the winter of 2006-2007 when 100 birds were released in the Mississippi Lowlands region. Missouri's primary efforts to establish wild turkey populations ended in 1979 after several thousand wild turkeys had been translocated to areas identified as having suitable habitat but no turkey population. The recent attempts since 2000 to translocate wild turkeys into southwest and southeast Missouri, where turkeys already exist, have been only marginally successful. Because of the high cost of translocation and the marginal potential for long-term population increase, translocation of turkeys is currently a very low priority for the Department.

Figure 1. Missouri total spring wild turkey harvest by county. Total harvest includes harvest from the youth and regular seasons, 2010.

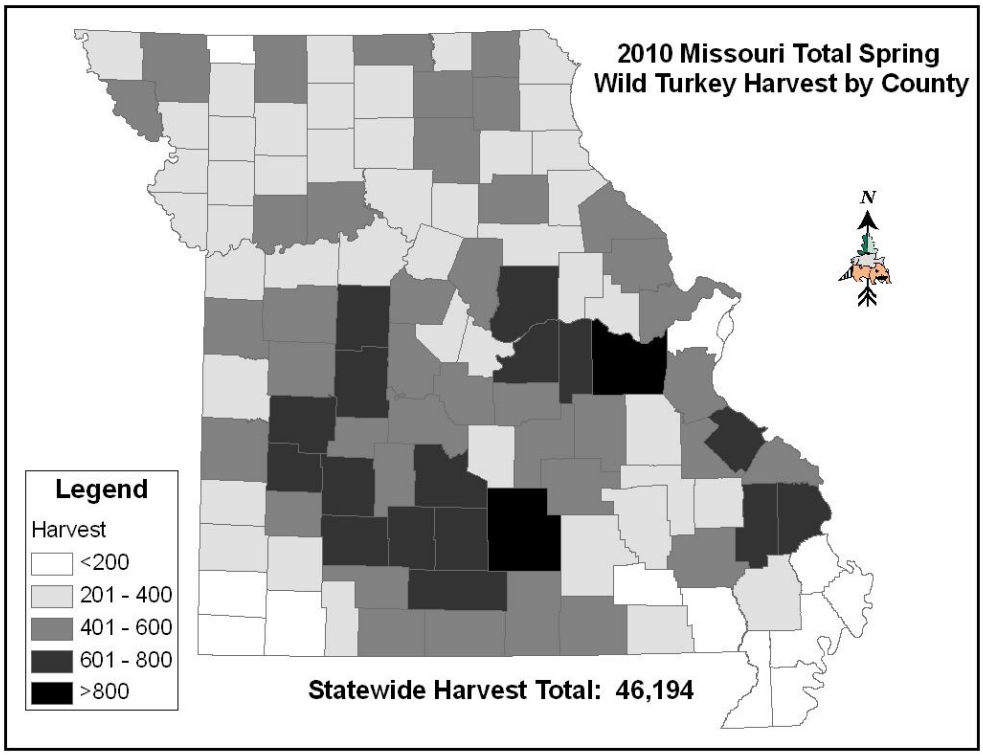
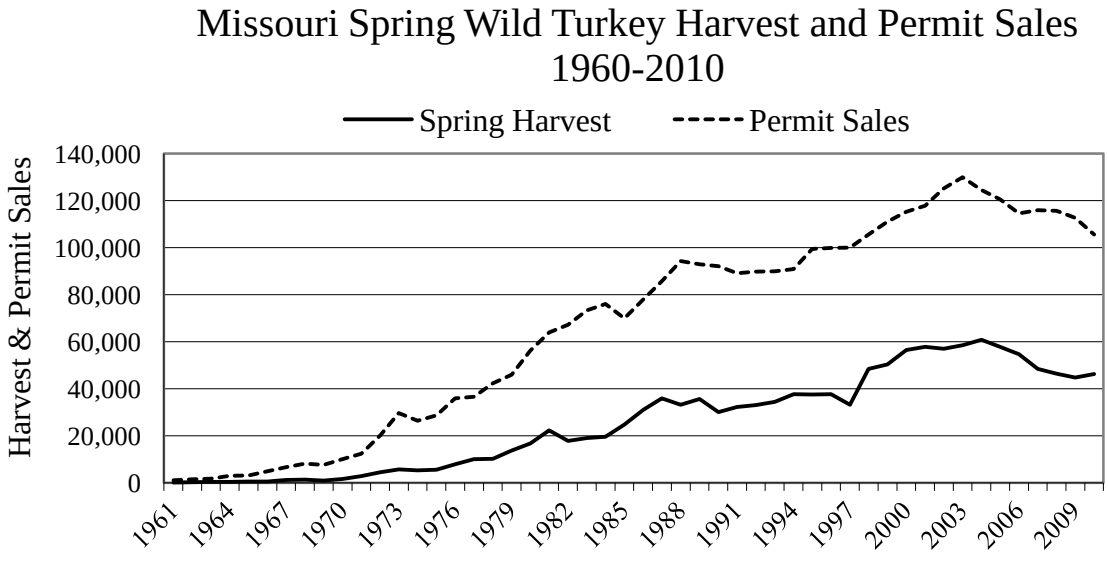


Figure 2. Number of wild turkeys harvested in Missouri during the combined youth and regular spring seasons and the number of turkey hunting permits sold[1] for the spring season, 1960-2010.



[1]Permit sales do not include free landowner permits.

Figure 3. Missouri fall firearms wild turkey harvest by county, 2010.

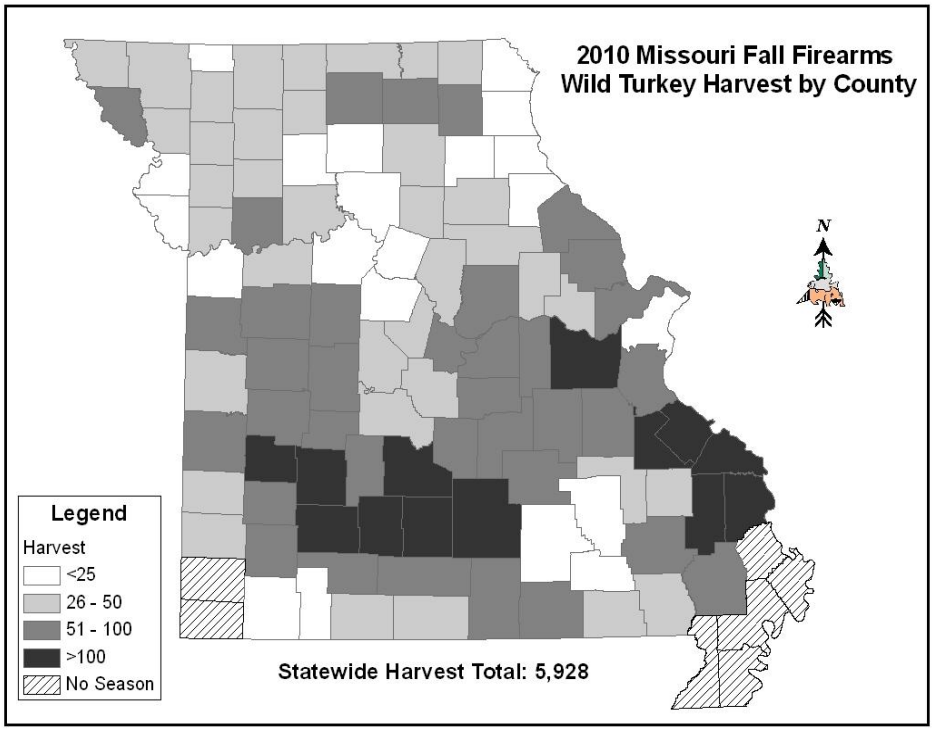
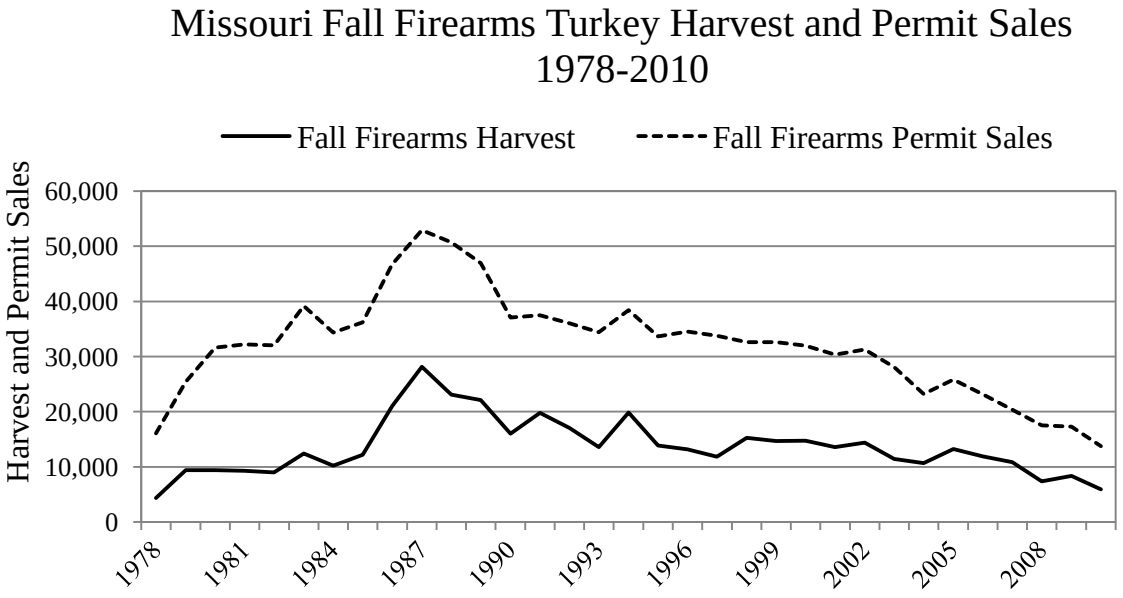


Figure 4. Number of wild turkeys harvested during the fall firearms wild turkey season in Missouri and the number of fall firearms permits sold[1] for the fall season, 1978-2010.



[1] Permit sales do not include free landowner permits.

Figure 5. Missouri statewide poult-to-hen ratios derived from the wild turkey brood survey conducted in June, July, and August, 1959-2010.

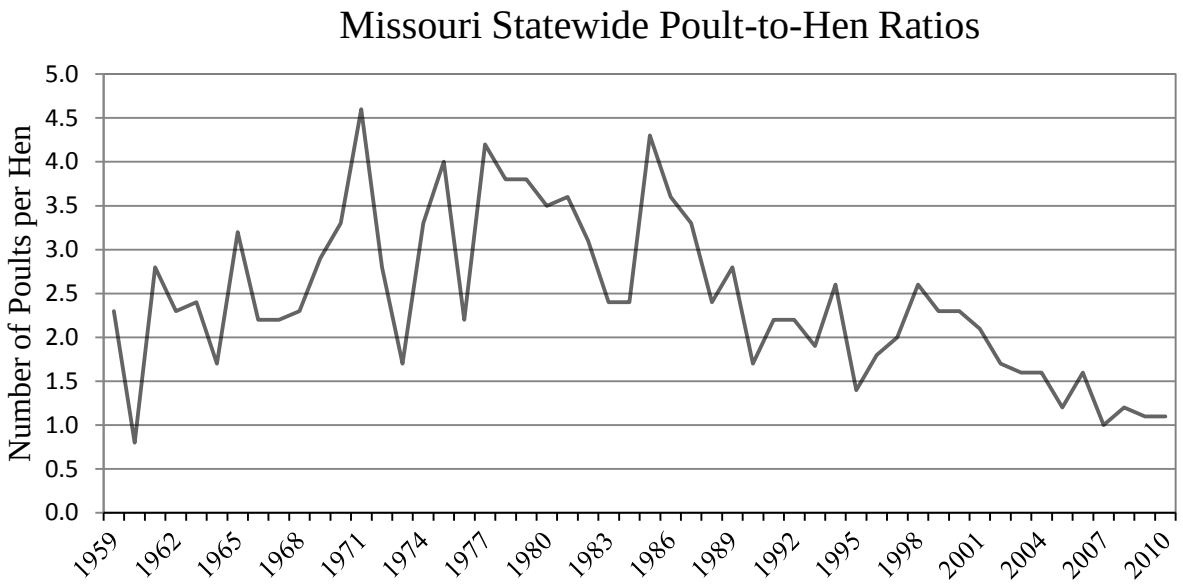


Figure 6. Harvest of wild turkeys during Missouri's fall archery season, 1975-2009.

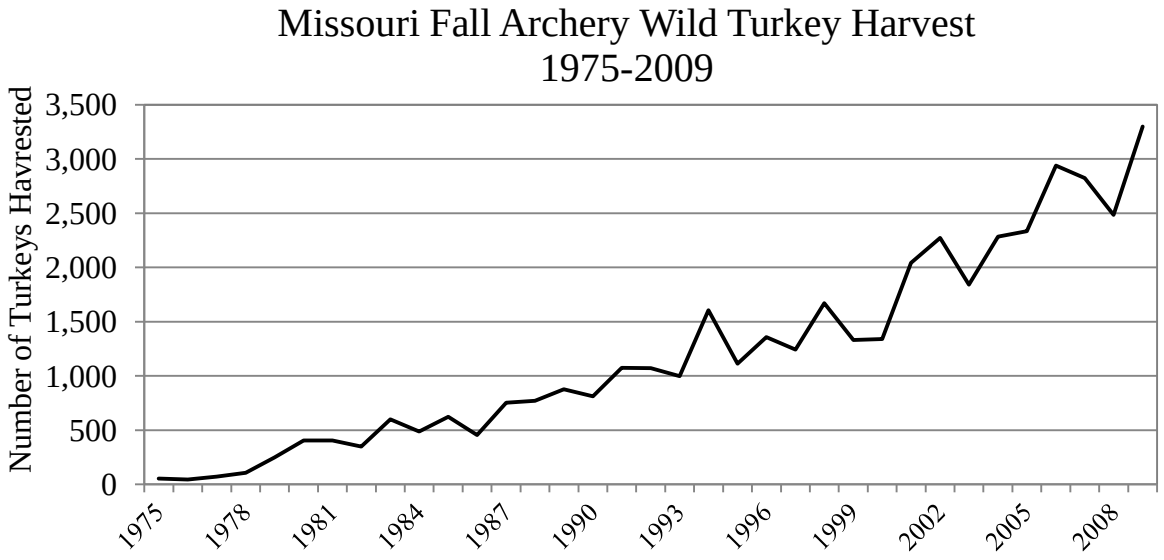


Figure 7. Wild turkey productivity regions in Missouri.

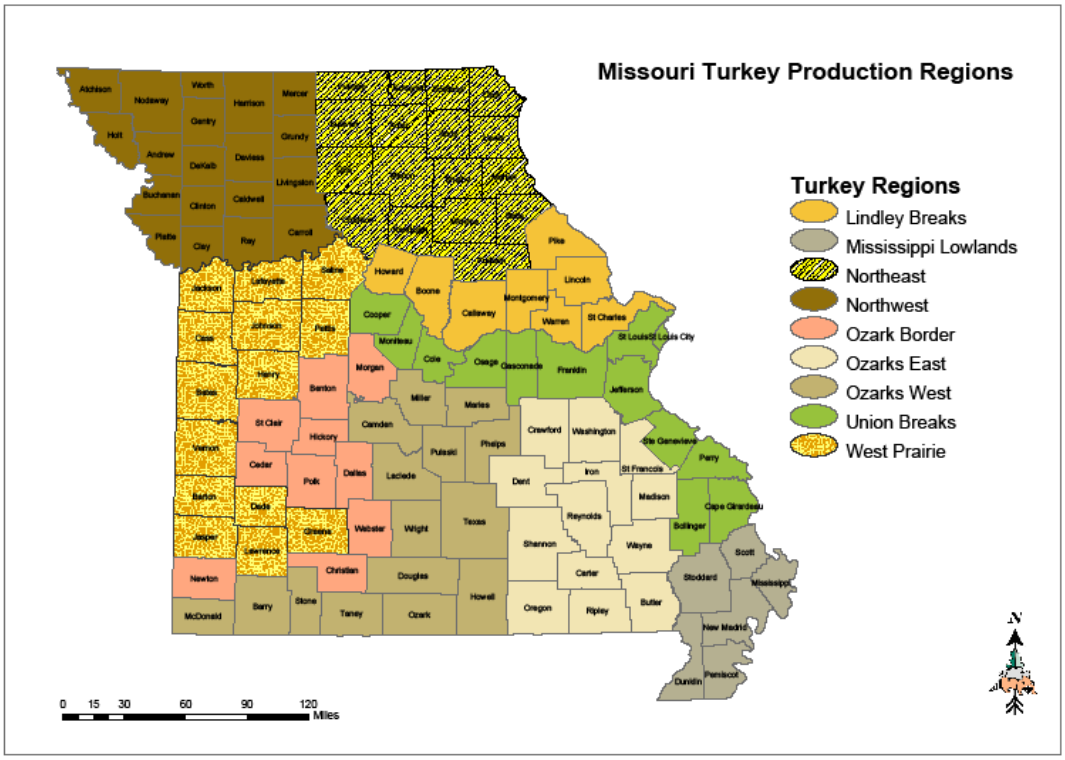


Table 1. Missouri total spring turkey season harvest and permit sales[a], 1986-2010.

Year	Spring Harvest	% Change From Previous Year	Spring Permit Sales	% Change From Previous Year
2010	46,194	+3.3	105,501	-6.3
2009	44,713	-3.5	112,579	-2.1
2008	46,314	-4.4	115,047	-0.7
2007	48,472	-11	115,897	+1.2
2006	54,712	-5.2	114,529	-4.8
2005	57,743	-5.2	120,215	-3.5
2004	60,744	+3.9	124,533	- 4.2
2003	58,421	+2.4	130,021	+3.8
2002	57,034	-1.3	125,157	+6.3
2001[b]	57,842	+1.7	117,736	+2.2
2000	56,841	+13.0	115,190	+3.8
1999	50,299	+3.8	110,939	+5.1
1998[c]	48,462	+45.9	105,518	+5.6
1997	33,216	-12.4	99,933	+0.1
1996	37,708	+0.3	99,879	+0.5
1995	37,472	-1.2	99,412	+8.8
1994	37,721	+9.8	90,810	0.0
1993	34,354	+4.0	89,899	+0.1
1992	33,035	+2.5	89,803	+0.8
1991	32,237	+7.3	89,077	-3.3
1990	30,056	-15.6	92,093	-0.9
1989	35,618	+7.3	92,901	-1.5
1988	33,187	-7.7	94,301	+10.0
1987	35,951	+16.1	85,723	+9.9
1986[d]	30,965	+25.0	77,972	+10.3

[a] Does not include free landowner permits.
[b] 2-day youth season initiated.
[c] Season length increased to 21 days; 2 bird bag limit with only 1 the first week and 1 per day.
[d] Two week season; 2 bird limit; one bird could be harvested per week.

Table 2. Missouri fall firearms turkey season harvest and permit sales[a], 1986-2010.

Year	Fall Firearms Harvest	% Change From Previous Year	Fall Permit Sales	% Change From Previous Year
2010	5,928	-29.0	13,736	-20.5
2009	8,351	+13.0	17,287	-1.4
2008	7,389	-32.0	17,533	-14.0
2007	10,859	-9.0	20,397	-11.9
2006	11,927	-9.9	23,141	-10.3
2005[b]	13,233	+11.9	25,805	+11.2
2004	11,824	+3.4	23,215	-17.4
2003	11,436	-20.5	28,108	-10.3
2002	14,392	+5.9	31,329	+1.2
2001	13,596	+2.8	30,949	-3.2
2000	13,230	-9.7	31,968	-2.0
1999	14,651	-4.5	32,606	0.0
1998[c]	15,343	+29.3	32,593	-3.5
1997	11,866	-10.2	33,765	-2.2
1996[d]	13,207	-4.8	34,522	+2.6
1995	13,866	-30.2	33,642	-12.6
1994	19,869	+46.4	38,424	+11.8
1993	13,569	-20.4	34,379	-4.6
1992	17,061	-13.8	36,033	-3.8
1991	19,788	+23.6	37,469	+1.0
1990	16,015	-27.6	37,080	-21.0
1989	22,131	-4.1	46,946	-7.4
1988	23,080	-18.0	50,715	-4.2
1987	28,139	+33.9	52,922	+13.4
1986[e]	21,019	+72.6	46,688	+28.9

[a] Does not include free landowner permits.
[b] Regulations liberalized to allow hunters to harvest both turkeys on the same day; season length increased to 31 days.
[c] All conservation and all hunting permit types eliminated.
[d] All conservation and all hunting permits issued.
[e] Bag limit increased from 1 to 2 birds.

Table 3. Index (ratio of poults per hen) of Missouri turkey production during June-August 2010, compared to previous years. Index is based on field observations of hens and poults by volunteers and MDC staff during annual brood surveys. For each interval value, the % change indicates how the 2010 index compares to the previous year, or the average for periodic intervals.

Production Region	2010 Index	1-year (2009) % change	5-year (2005-2009) % change	10-year (2000-2009) % change	20-year (1990-2009) % change
Northwest	1.07	+33.8	+3.5	-31.9	-81.0
Northeast	1.19	+14.4	-1.0	-30.0	-49.4
Lindley Breaks	1.21	-3.2	+1.3	-32.1	-65.5
Union Breaks	1.13	-13.7	-14.3	-39.0	-54.4
Mississippi Lowlands	2.29	+44.9	+38.6	-16.6	+7.7
Ozarks East	1.07	-34.8	-31.7	-68.7	-84.4
Ozarks West	1.14	-5.8	-8.8	-37.6	-49.3
Ozark Border	1.03	+25.6	-5.3	-47.9	-75.5
West Prairie	1.08	+0.9	+11.6	-23.9	-73.4
Statewide	**1.13**	**-1.7**	**-5.8**	**-36.3**	**-59.4**

NEBRASKA TURKEY STATUS REPORT

MIDWEST DEER AND TURKEY GROUP

Camp Grafton, Devils Lake, North Dakota
23-25 August 2010

Submitted by the State of Nebraska
Nebraska Game and Parks Commission - Wildlife Division
Research, Analysis and Inventory Section
Big Game Program Manager: Kit Hams
Upland Game Program Manager: Dr. Jeffrey J. Lusk

Collection and Analysis of Turkey Harvest Data - 2009

Job E2: Collection and Analysis of Turkey Harvest Data **(K. Hams & J. Lusk)**

2009 Spring Turkey Harvest

Objective: Estimate total harvest, success, effort, distribution of kill, sex and age composition, and hunter opinion on the spring turkey season.

Activity: Within 1 month of the season's close, send an email survey to those hunters who provide a valid email address when buying spring turkey permits. Within two weeks of the 1st mailing, send a 2nd mailing to nonrespondents. Season dates for 2009 were March 25 - May 31 for Statewide Archery; April 18 - May 31 for Shotgun; April 11– May 31 for Youth Shotgun.

Results: The spring 2009 harvest was estimated from 15,928 email surveys sent to turkey hunters who provided an email address. 5,535 hunters responded who reported buying 7,402 permits.

Hunter response rate was 35%, however multiple permits increased the permit response rate to 46%.

Table 1. Mail survey: mailings, returns and success.

Unit	Permits Sold	Mailings	Permits Reported		Reported Harvest	Estimated Harvest	Harvest Success	Mean Days Hunted
			No.	%				
Youth	2,776		488	18	261	1,485	53%	
Shotgun	24,880		5,181	21	3,542	17,009	68%	
Archery	7,637		1,733	23	837	3,688	48%	
Total	35,293	15,928	7,402	21	4,640	19,819	61%	5.4

A total of 35,293 spring turkey permits was issued with an estimated harvest of 19,819 turkeys. Archery success was 48%, youth success was 53% and shotgun hunter success was estimated at 68%. Two percent of permit buyers did not hunt.

Permit sales and harvest are at all time record highs and reflect the continued growth in the statewide turkey population over the past 7 years (Table 2).

Table 2. Spring Turkey Archery and Shotgun Success, 2003-2009.

		2003	2004	2005	2006	2007	2008	2009
Archery	Permits	4,100	4,759	5,349	5,902	6,830	6,792	7637
	Harvest	1,483	1,837	2,340	2,424	2,601	2,888	3,688
	% Success	36	39	44	41	38	43	48%
Shotgun	Permits	19,678	22,891	21,707	22,716	25,432	24,650	24,880
	Harvest	8,627	11,021	11,641	12,636	14,270	15,333	17,009
	% Success	46	48	54	56	56	62	68%
Youth	Permits	0	0	1,525	1,394	1,490	2,480	2,776
	Harvest			801	750	1,130	1,548	1.485
	% Success			53	54	76	62	53%

Hunters were asked on the survey card to if they harvested a juvenile or adult male. Reported ages were 19% juvenile in 2009 (jakes hatched in 2008). The proportion of juveniles harvested in the previous ten years has ranged from 19% to 45% and is reported in Table 3.

Table 3. Percent juvenile toms in the harvest, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
% Juvenile	23	45	44	35	28	26	20	21	19	18

Harvest distribution by county is estimated from 4,409 county of kill locations.

Top ten counties in order of estimated kill were: Knox, Custer, Boyd, Holt, Cherry, Dawes, Lincoln, Frontier, Keya Paha and Sheridan. The top ten counties of the state in kill per miles were: Boyd, Knox, Sarpy, Johnson, Harlan, Seward, Cass, Keya Paha, Douglas and Dakota.

County harvest data was assigned to regions. Kill per 100 square miles ranges from 65 in the Verdigre to 13 in the Panhandle. Estimated harvest for each region is in Table 4.

Table 4. Estimated Turkey Harvest and Kill density by Region

UNITS	Square Miles	Reported Kill	Estimated Harvest	Approximate Kill per 100 sq. miles
Central	10,696	451	2150	20
East	13,425	1,208	5760	43
Niobrara	8,964	345	1645	18
Panhandle	14,181	380	1812	13
Southwest	24,696	1,359	6480	26
Verdigre	4,918	666	3175	65

Discussion: The email survey of turkey hunters has been a very efficient tool for collecting and compiling harvest data. It has allowed us to triple the amount of data collected while putting forth half the effort and expense of the mail survey. Spring harvest figures for 2000-2009 concur with population inventory data from the Rural Mail Carrier Survey (Tables 5 and 6) and indicate that turkey populations in Nebraska are at record high levels. Harvest has tripled over the past 10 years, yet the turkey population could likely sustain significantly more hunting pressure over most of the state. RMCS suggests a quadrupling in the statewide population since year 2002.

Table 5. Spring Harvest (2000 – 2009)

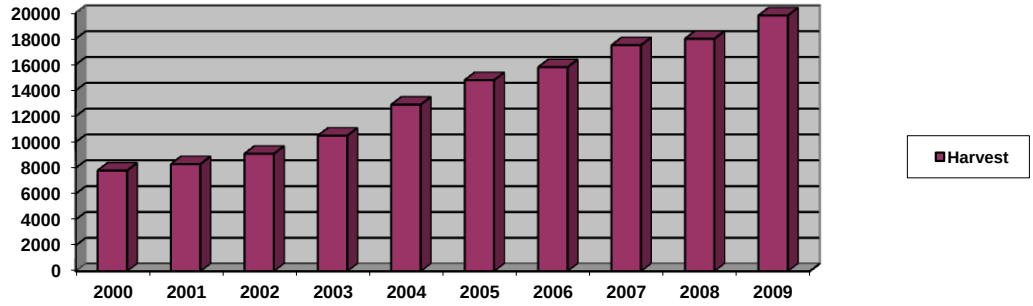
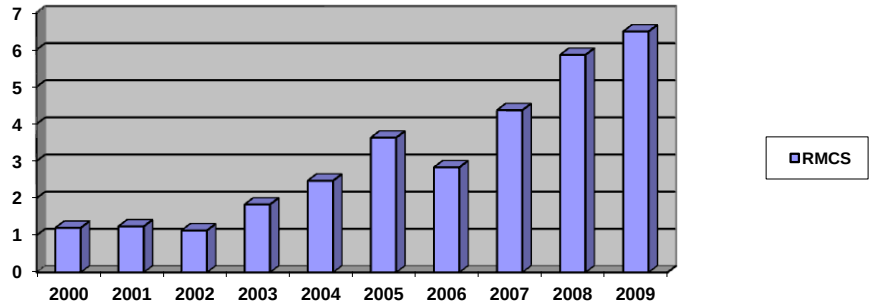


Table 6. Spring Rural Mail Carrier Survey (2000 – 2009)



2009 Fall Turkey Harvest

The Fall 2009 turkey hunter survey results have not been compiled.

Appendix 1. Nebraska Turkey Season History (1980 – 2009)

	Total		Total		Total	
	Spring	Fall	Spring	Fall	Nres Permits	
Year	Harvest	Harvest	Permits	Permits	SPR	Fall
1980	1,153	2,167	3,477	3,607		
1981	1,813	2,329	4,955	4,914		
1982	1,763	2,381	5,707	5,188		
1983	1,795	2,896	5,910	5,735		
1984	1,752	3,011	6,217	5,761		
1985	2,386	3,014	7,058	5,888		
1986	2,528	2,964	7,431	5,923		
1987	3,256	4,107	7,922	6,678		
1988	4,215	4,619	9,058	7,926		
1989	4,594	4,198	10,205	8,604		
1990	4,231	3,718	11,594	7,069		
1991	4,147	3,966	11,125	7,200		
1992	4,698	3,028	12,079	6,934		
1993	3,918	2,849	11,337	6,068		
1994	4,269	3,028	11,552	6,094		
1995	4,513	2,805	12,057	5,911		
1996	4,823	2,668	13,439	5,783		
1997	5,353	2,565	14,479	5,411		
1998	6,160	2,724	15,759	5,906		
1999	7,443	2,678	17,605	5,614		
2000	7,812	2,502	19,430	6,338		
2001	8,309	3,067	21,757	6,571	3,307	380
2002	9,102	3,242	22,500	6,582	3,573	381
2003	10,536	3,305	23,778	7,071	3,865	430
2004	12,858	3,946	27,650	8,324	4,747	511
2005	14,782	3,816	28,581	8,437	5,663	612
2006	17,531	4,426	30,012	9,642	6,368	541
2007	18,001	9,429	33,758	12,283	7,933	782
2008	19,819	8,775	34,099	11,335	8,712	797
2009	22,182		35,293		8,886	

MIDWEST DEER/TURKEY STUDY GROUP MEETING

Camp Grafton
Devils Lake, ND
August 23 - 25, 2010

NORTH DAKOTA WILD TURKEY REPORT

Stanley C. Kohn
North Dakota Game and Fish Department
Bismarck, N.D. 58501

POPULATION ESTIMATES, 2009

The Department uses several population techniques to obtain trends on our wild turkey population. We have a landowner survey that is sent to most landowners who have turkeys winter on their land (Figure 1). We also obtain population estimates from rural mail carriers who count upland game birds four times of year, January, April, July and October. Finally, our district biologists and game wardens record observations of wild turkey hens, broods and poults on standardized pheasant brood routes during July and August annually. Incidental turkey brood data is also collected during brood surveys of sharp-tailed grouse. Results of the 2009 statewide brood survey showed number of turkeys, number of broods, and young per adult hen to be all down from 2008 and down over the past five years (Table 1). Other population surveys, like our midwinter landowner survey and rural mail carrier survey, showed similar trends in number of birds observed over the past five years. Turkey production has been rather poor in 2008 and 2009 especially in the western one-third of the state primarily due to cool, wet springs, causing poor nesting success and poor young survival. Our 2009 winter landowner survey of turkeys showed numbers to be down over 30% from 2008. Many landowners in the western part of the state are reporting low turkey numbers and very few poults. With the brood reports received to date this summer, it appears the number of broods and poults observed is improved over 2009 but still not at the level desired.

FALL HUNTING SEASON, 2009

The state is divided into twenty-two hunting units and these areas include all of North Dakota's 53 counties (Figure 2). During the fall of 2009, the entire state was open for wild turkey hunting except for unit 53 in the northwestern part of the state and unit 21 in the southwestern part of the state. These two areas have been closed for the past two fall hunting seasons because of low turkey numbers in these units.

North Dakota has no specific youth hunting season for wild turkeys in the fall. We also do not have a specific bow season for turkeys. We provide only a one time period for hunting wild turkeys in the fall, and you can choose your weapon from shotguns, muzzleloading rifles, handguns and bow/arrows. During the fall of 2009, the season was held from October 10, 2009 through January 10, 2010. There were 6,805 permits available and 6,804 were issued (284 gratis and 6,520 general permits). This was a decrease of 1,274 permits (12 percent) over 2008.

From the wild turkey questionnaire, it was determined that 4,274 permittees (63 percent) hunted during the fall. Hunters harvested 1,851 wild turkeys for a success of 43.3 percent. A summary of the fall hunting statistics for ND since 1958 can be found in Table 2. Figure 3 is a graph of fall harvest statistics from 1980 – 2009. Data regarding sex and age of the harvest was determined by a voluntary sample of wing tips and breast feathers sent in by hunters. Based upon a sample of 357 harvested birds, 44 percent of the 2009 fall harvest was females and 44 percent was juveniles.

SPRING 2010 HUNTING SEASON

As with the fall hunting season for turkey, the state uses the same twenty-two hunting units during the spring season. These units include all of North Dakota's 53 counties. During the spring of 2010, the entire state was open for wild turkey hunting except for unit 53 in the northwestern part of the state and unit 21 in the southwestern part of the state. These two areas have been closed for the past two spring hunting seasons because of low turkey numbers in these units.

A couple new regulations went into affect two years ago as a result of legislative action:

1) Youth – first time spring turkey hunters ages 15 or younger receive one spring license valid for the regular hunting season for a specific unit.

2) Only residents can apply for a spring turkey license. However, the National Wild Turkey Federation may receive one spring license to raffle or auction to the highest bidder.

The season opened April 10 and closed May 16 (30 days). Only bearded wild turkeys were legal to be harvested. A total of 6,832 applicants (down 10 percent from 2009) were received for the 6,641 permits (up 4 percent from 2009) that were available. This included 321 gratis, 172 youth and 6,152 general permits.

Data from the spring hunter questionnaire showed that 5,388 of the permittees (80%) hunted. Hunters harvested 2,323 wild gobblers (up 13 percent from 2009) for a hunter success of 43 percent (Table 3, Figure 4).

FALL HUNTING SEASON, 2010

For the 2010 fall hunting season, there are 5,725 permits available, 1,080 less than available during the fall 2009. Two hunting units, one in the northwest and one in the southwest, will be closed this fall due to low turkey numbers. The season will open on October 9, 2010 and close on January 9, 2011 (100 days). This is the same season length as in 2009. Only residents are eligible to apply for the first drawing of licenses. If licenses are left after the first drawing, then both residents and nonresidents can apply for the remaining licenses on a first come basis. This will be the tenth year that the entire state will be open to wild turkey hunting.

TRAP/TRANSPLANT PROGRAM

During the 2009-2010 wild turkey trapping period, 282 wild turkeys were trapped at three locations. Two locations were in the southeastern part of the state and another site was in

south-central ND. The trapped turkeys were released at one site on private land and on four separate state wildlife management areas. Of the total birds trapped and released, the age ratio was 75A:71J and the sex ratio was 47M:89F. The drop-net was used in the trapping operation. All birds were Eastern turkeys. In 2008, abundant snowfall also caused turkeys to cause problems in farm yards so trapping was used to relieve some of the problems.

FUTURE RESEARCH

There has never been any research work done on turkeys in North Dakota. Turkeys are not native to North Dakota but have been in the state for about 50 years, and they have been hunted during most of this time. There are many biological and ecological factors we would like to look at with our birds, but we have decided to evaluate our various population techniques first. We are initiating a research project with Dr. Scott Lutz at the Univ. of Wisconsin – Madison to evaluate our population sampling techniques plus a gobbler survey to see which technique works the best in our habitat. We hope to have a student start the project this fall/winter with field work beginning this winter/spring.

Figure 1. Wild Turkey Landowner Questionnaire

2009-2010 Wild Turkey Landowner Questionnaire

1. How many wild turkeys wintered on your land during the winter of 2009-2010? _____

2. Description of land on which these birds spent most of the winter
   Twp. _____ Rge. _____ Sec. _____

3. Is this flock likely to be reported by one of your neighbors as wintering on his land?
   Yes ____ No ____
   If yes, name of person _____

Thank you for your cooperation. Please complete and drop in any mail box, postage is paid.
SFN 6467

Table 1. Wild turkey brood statistics from North Dakota, 2005-2009.

	2005	2006	2007	2008	2009
Number of routes	239	241	249	238	267
Number of miles	4,793	4,736	4,906	4,718	5,315
Number of hours driven	385.9	388.8	408.5	352.7	396.4
Number of adults	176	211	155	156	82
Number of young	96	423	242	143	114
Number of broods	17	47	37	20	15
Birds per 100 miles	5.7	13.4	8.1	6.3	3.7
Broods per 100 miles	0.4	1.0	0.8	0.4	0.3
Young per adult hen	1.1	4.0	3.5	3.6	3.1
Birds per hour	0.70	1.63	0.97	0.85	0.49
Broods per hour	0.04	0.12	0.09	0.06	0.04
Age Ratio (young/adult)	0.55	2.00	1.56	0.92	1.39
Average brood size	5.65	9.00	6.54	7.15	7.6

Figure 2. Map of North Dakota turkey units.

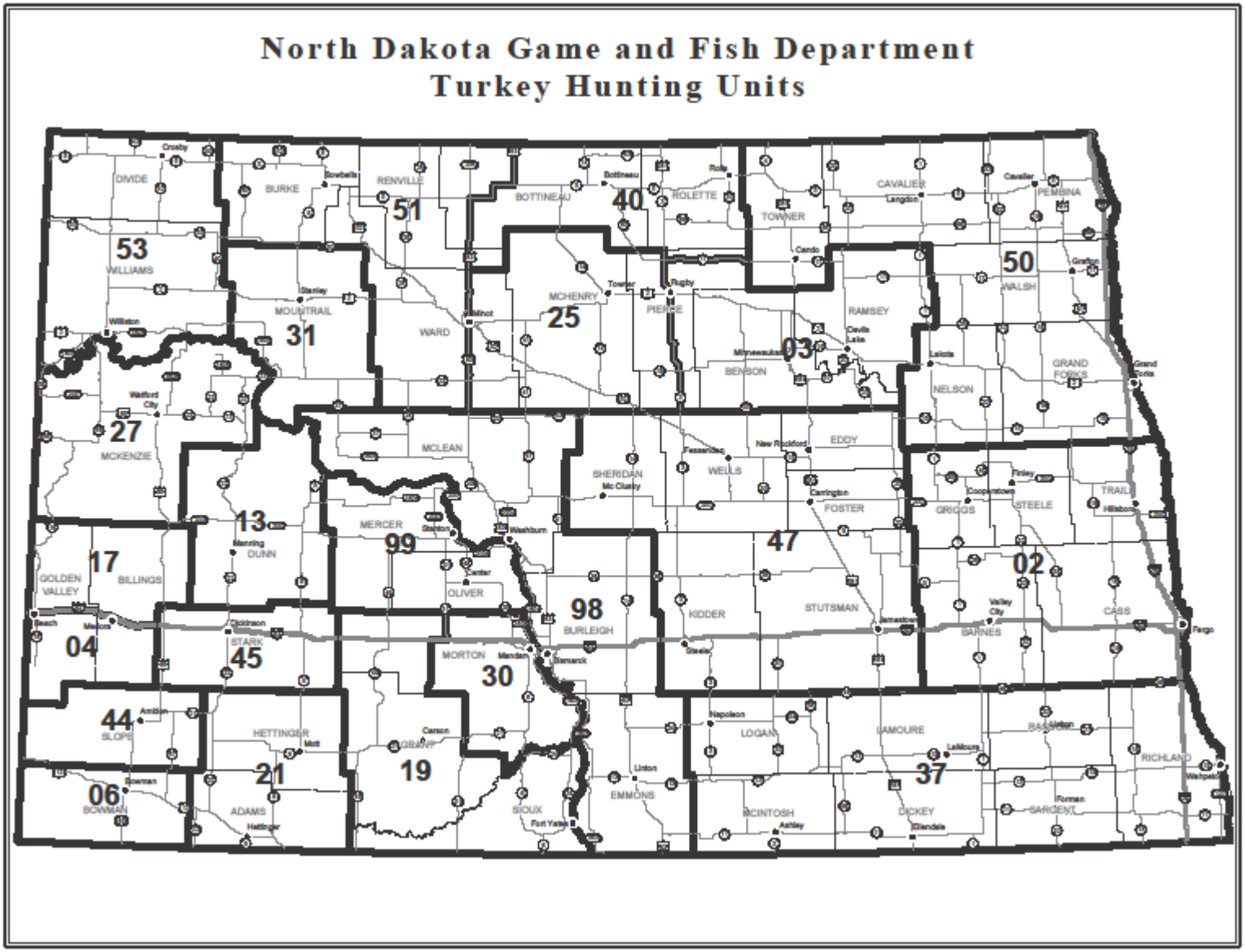


Table 2. Fall harvest statistics for wild turkeys in North Dakota.

Year	Number of applicants	Number of permits available	Number of permits issued*	Number of hunters	Number of birds bagged	Percent success	Average days hunted	Days to bag a turkey
1958			376	376	88	23.4		
1959	No Season		--	--	--	--		
1960	No Season		--	--	--	--		
1961			309	246	174	70.7		
1962			426	392	241	61.5		
1963			306	298	171	57.4		
1964			404	386	198	51.3		
1965			350	290	109	37.6		
1966	No Season		--	--	--	--		
1967			200	183	103	56.3		
1968			200	178	97	54.5		
1969			197	186	117	62.9		
1970			197	180	131	72.8		
1971			201	185	134	72.4		
1972			227	205	129	62.9		
1973			203	195	151	77.4		
1974			307	285	213	74.7		
1975			359	308	186	60.4		
1976			500	466	653	140.1		
1977			650	513	411	80.1		
1978			844	737	540	73.3		
1979	2,834	975	961	881	583	66.2		
1980	2,611	1,155	1,135	1,029	736	71.5		
1981	4,969	1,530	1,514	1,310	976	74.5		
1982	3,258	1,530	1,501	1,361	975	71.6		
1983	3,057	1,660	1,678	1,488	1,181	79.4		
1984	3,143	1,710	1,707	1,521	1,197	78.7		
1985	3,902	1,960	1,946	1,631	1,269	77.8		
1986	3,800	2,235	2,126	1,861	1,324	71.1		
1987	3,393	2,455	2,417	2,177	1,668	76.6		
1988	6,918	5,930	5,938	5,098	3,607	70.8		
1989	5,890	5,810	5,760	4,818	3,233	67.1		
1990	6,921	4,765	4,735	3,845	2,556	66.5		
1991	7,305	4,580	4,593	3,683	2,236	60.7		
1992	6,402	3,585	3,605	2,938	1,830	62.3		
1993	6,030	3,585	3,546	2,735	1,331	48.7		
1994	4,330	3,585	3,154	2,578	1,484	57.6		
1995	3,862	3,195	3,212	2,608	1,619	62.1		
1996	4,348	3,230	3,241	2,595	1,946	75.0		
1997	4,717	3,250	3,273	2,695	1,835	68.1		
1998	5,218	3,855	3,860	3,141	2,114	67.3		
1999	4,977	4,620	4,620	3,941	2,750	69.8		
2000	7,665	6,000	6,000	4,690	3,029	64.6	2.9	2.5
2001	8,119	6,510	6,622	5,224	3,083	59.0	2.9	2.6
2002	8,399	6,610	6,752	5,234	3,157	60.3	3.1	2.4
2003	8,048	9,095	8,896	6,886	4,410	64.0	2.8	--
2004	10,070	10,980	11,224	8,064	3,773	46.8	3.4	2.5
2005[1]	9,334	9,230	9,331	6,722	3,191	47.5	3.3	2.6
2006	8,319	7,925	8,066	5,982	3,194	53.4	3.1	2.3
2007	8,138	8,025	6,961	5,743	2,696	46.9	3.0	2.8
2008	8,767	8,700	8,215	5,539	2,632	47.5	3.2	3.1
2009	7,126	6,805	6,804	4,274	1,851	43.3	3.1	
2010								
Total								

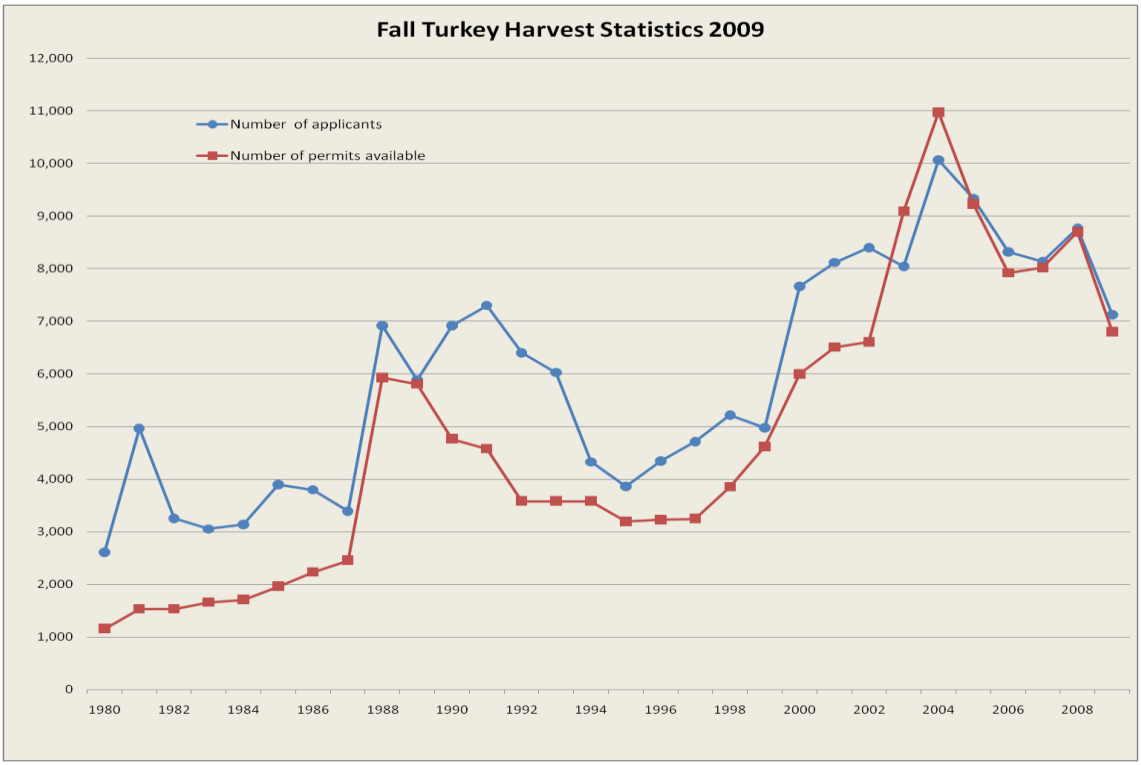
*Includes lottery permits (10,504) plus gratis permits (720) in 2004.

[1]First year nonresidents were allowed to apply for fall turkey AFTER the first drawing for residents.

Table 3. North Dakota spring wild turkey hunting seasons.

Year	Number of applicants	Number of permits available	Number of permits issued	Number of hunters	Number of birds bagged	Percent success
1976			30	22	9	40.9
No Spring Wild Turkey Hunting Season 1977-1981						
1982	1,660	72	70	57	18	31.6
1983	470	160	160	146	61	41.8
1984	1,033	270	285	231	94	40.7
1985	1,691	285	283	257	130	50.6
1986	1,548	325	325	290	155	53.4
1987	2,065	455	455	387	232	59.9
1988	2,032	600	600	527	331	62.8
1989	2,561	845	843	753	502	66.7
1990	5,151	1,175	1,188	998	547	54.8
1991	5,783	1,485	1,490	1,319	658	49.9
1992	6,345	1,705	1,717	1,533	746	48.7
1993	5,442	1,795	1,807	1,605	696	43.4
1994	4,153	1,500	1,500	1,328	555	41.8
1995	4,157	1,315	1,322	1,174	581	49.5
1996	4,399	1,435	1,445	1,277	641	50.2
1997	4,245	1,520	1,528	1,272	669	52.6
1998	5,208	1,695	1,695	1,484	924	62.3
1999	6,583	2,055	2,060	1,835	1,173	63.9
2000	7,720	2,505	2,534	2,266	1,421	62.7
2001	8,207	2,925	2,925	2,556	1,449	56.7
2002	9,370	3,310	3,310	2,888	1,679	58.1
2003	8,662	3,710	3,709	3,282	1,896	57.8
2005	8,537	6,165	6,213	5,359	2,391	44.6
2006	8,629	6,425	6,405	5,318	2,430	45.7
2007	8,138	6,935	6,961	5,743	2,696	46.9
2008	7,966	7,300	6,506	5,997	2,859	47.7
2009	7,655	7,136	7,138	5,476	2,051	37.5
2010	6,832	6,641	6,645	5,388	2,323	43.1
Total Avg.	5,223	2,562	2,539	1,847	1,068	57.8

Figure 3. Fall harvest statistics for turkeys in North Dakota, 1980 - 2009.



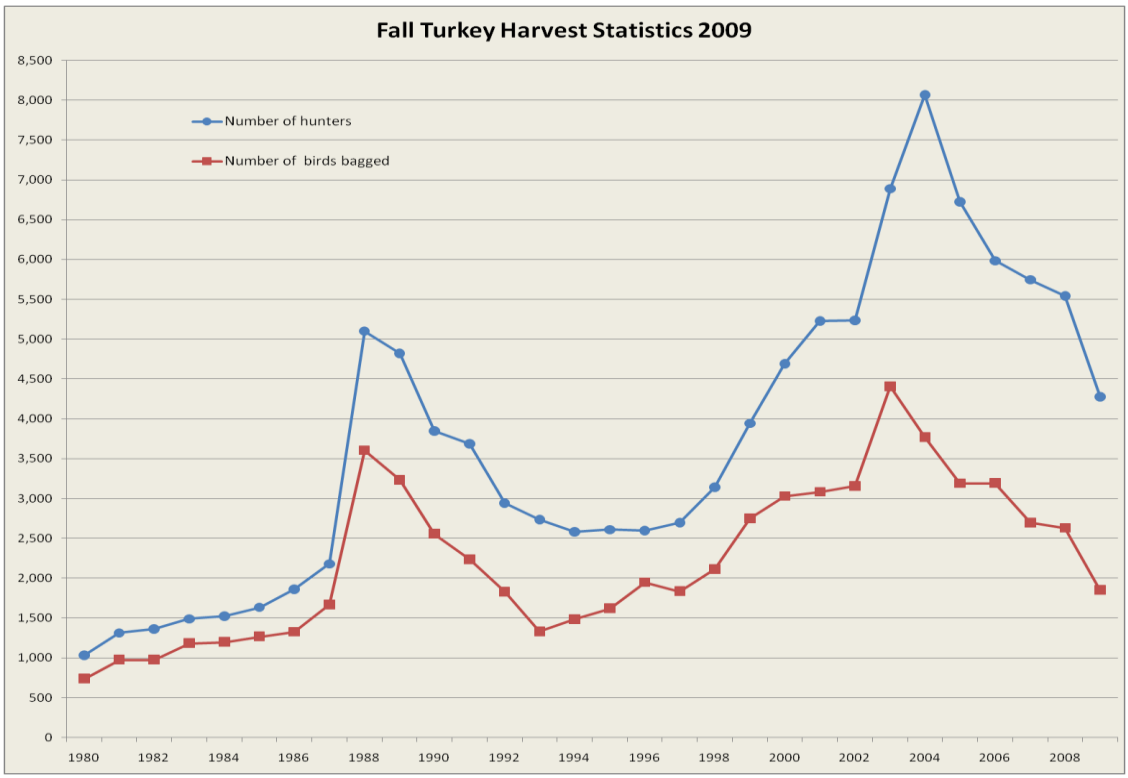
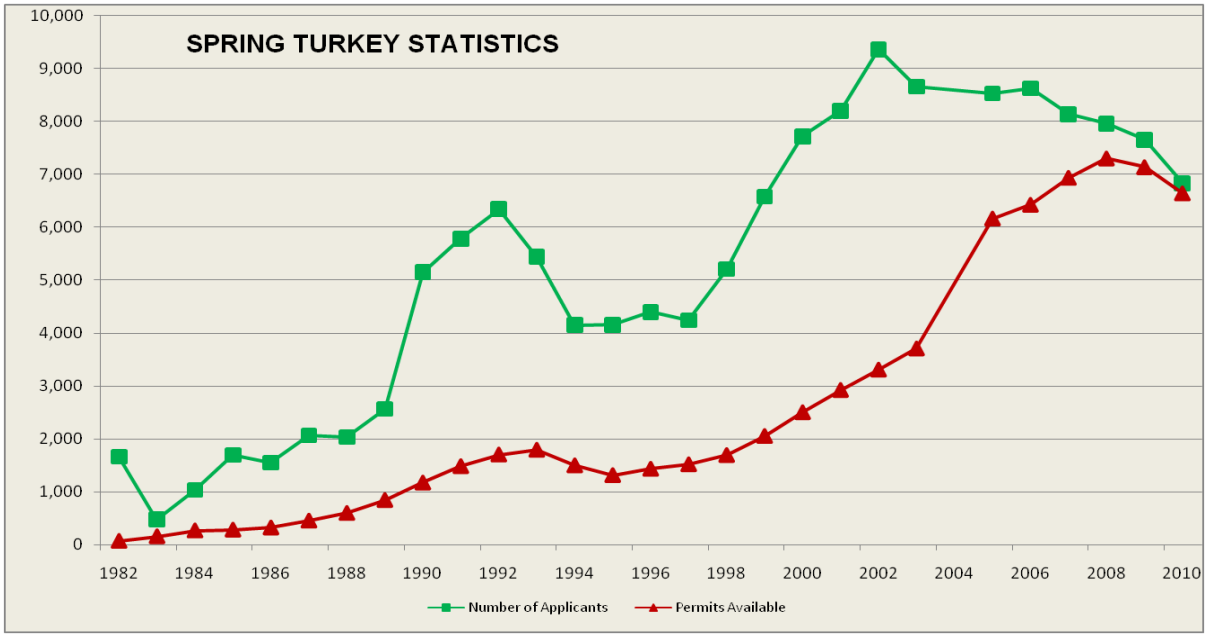
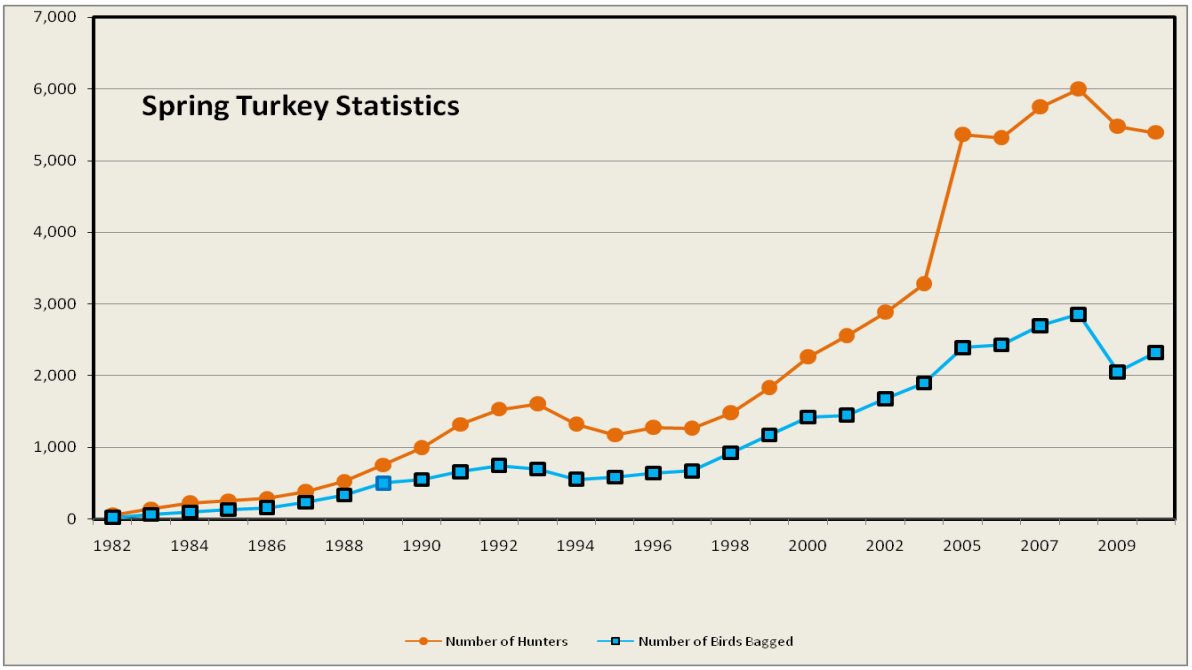


Figure 4. Spring harvest statistics for wild turkeys in North Dakota, 1980 - 2010.





Ohio Turkey Report

WILD TURKEY MANAGEMENT AND RESEARCH IN OHIO
2009-10 SUMMARY

Fall 2009

Fees	Hunting license required – see digest Fall Turkey Permit: $24.00 Youth Fall Turkey Permit: $12.00 Reduced-Cost Senior Fall Turkey Permit: $12.00 Senior Fall Turkey Permit: Free
Permits Sold	7,648 Fall Turkey permits (+2%) 1,045 Youth Fall Turkey Permits (+3%) 843 Reduced-cost Senior Fall Turkey Permits (+17%) 13,119 Senior Fall Turkey Permits (-9%)
Hunter Numbers	Approx. 20,000
Minimum Age	None
Season Dates	Shotgun: Oct 10 – Nov 29 2009
Bag Limit	1 bird of either sex
2009 Harvest	2,255 turkeys (1,089 females, 977 males, 189 unknown); 5% increase over 2008
Disease Issues	None
Other Issues	Mast crop failure resulted in dramatic increase in fall harvest in some southeastern Ohio counties.

Spring 2010

Fees	Hunting license required – see digest Spring Turkey Permit: $24.00 Youth Spring Turkey Permit: $12.00 Reduced-Cost Senior Spring Turkey Permit: $12.00 Senior Spring Turkey Permit: Free
Permits Sold	51,041 Spring Turkey permits (-1%) 11,043 Youth Spring Turkey Permits (+1%) 3,482 Reduced-cost Spring Turkey Permits (+17%) 12,822 Senior Spring Turkey Permits (-15%)
Hunter Numbers	Approx. 80,000
Minimum Age	None
Season Dates	Youth Spring Turkey: April 17 – 18 2010 Spring Turkey: April 19 – May 16 2010
Bag Limit	2 bearded turkeys; 1 per permit
2009 Harvest	23,421; 13% increase over 2009
Population estimate	230,000 turkeys; increasing trend Statewide
Disease Issues	None
Other Issues	All-day hunting was allowed during the last 2 weeks of the 2010 spring turkey season. The distribution of the 2010 spring harvest did not change by week of the season, but 25% of the turkeys killed during the last 2 weeks of the season occurred during the extended hunting hours.

Ministry of Natural Resources

Ontario

Natural. Valued. Protected.

2010 Wild Turkey Program Status Report

The Eastern Wild Turkey was extirpated from Ontario in the early 1900's. Restoration efforts began in 1984, and by 1987 a total of 274 birds had been transferred to Ontario from New York, New Jersey, Vermont, Michigan, Missouri, and Iowa. Approximately 4,400 turkeys were released in Ontario as part of the restoration program and the wild turkey is now established throughout and beyond its historic range in the province. No releases have been made in Ontario since the winter of 2004-2005.

Ontario's first modern spring turkey hunt was initiated in two Wildlife Management Units (WMUs) in 1987 and has since expanded throughout southern Ontario. The first modern fall turkey hunt was implemented in 2008. Provincial policy for turkey management is outlined in the Wild Turkey Management Plan for Ontario that was released in 2007.

In parts of Ontario where turkeys have been established longest turkey numbers appear to have stabilized and are fluctuating naturally. With generally moderate winters in recent years the birds have continued to expand their range and increase in number in new areas.

2010 Spring Turkey Hunt

Ontario's 2010 spring turkey hunt ran from April 26 to May 31. Hunters were allowed to purchase up to two turkey licences/seals and hunt in any open WMU for the duration of the season. Spring hunting hours were from ½ before sunrise to 7:00 pm. Only bearded birds could be harvested.

Reported spring turkey harvest in 2010 was 9,086 birds, down from 9,252 in spring 2009 (the provincial record harvest was 10,492 in 2008). Twenty eight percent of males harvested this spring were jakes. Harvest by time of day has been very consistent since afternoon hunting was first permitted in 2005, with approximately 80% of harvest occurring in the morning and the remainder between noon and 7:00 pm.

Ontario requires all individuals wishing to hunt turkeys to take the Ontario Wild Turkey Hunter Education Course and pass a written exam. Approximately 10,000 students have been trained in each of the last two years. Provincial spring turkey licence sales have been stable at just over 50,000 for the same period.

www.ontario.ca/mnr

2009 Fall Turkey Hunt

As is the case in most other jurisdictions, Ontario's fall turkey season framework is conservative in order to minimize the risk to population sustainability and to ensure there is no appreciable impact on birds available in spring. Ontario's fall turkey season begins the day after Canada's Thanksgiving Day (October 13, 2009) and runs for 13 days. Hunters may purchase one licence/seal, hunt in any open WMU, and harvest one turkey of either-sex.

Ontario's fall turkey hunt is much less popular than the spring hunt, in part due to a variety of other hunting options in mid-October (e.g. moose, bear, archery deer, small game, and waterfowl). The reported 2009 fall harvest in Ontario was 370 birds, and 62% of the harvested birds were hens (adult and juvenile).

Management Challenges

- Non-reporting of harvest – All successful turkey hunters are required to report their bird through an MNR telephone reporting line. The recent decline in spring harvest may be attributed primarily to low hunter harvest reporting rates. Mandatory reporting has only been required in recent years and for a few key species. OMNR will be working to better educate hunters on the importance of providing the required information.

- Agricultural conflicts – Regular complaints about turkey conflicts with agriculture occur, but actual damage is not common and occurs primarily during periods of deep snow in winter. Under these conditions turkeys may feed on stored livestock feed and in un-harvested crop fields. Ontario's turkey management plan includes information on best practices to prevent turkeys from keying in on agricultural food sources. Ontario has also worked to educate landowners on their right to harass or kill turkeys damaging their property. This can be done without any authorization from MNR.

- Pen-raised wild turkeys – This is currently a problem in only a couple areas province wide but may have the potential to become more widespread.

TURKEY REPORT

SOUTH DAKOTA

MIDWEST DEER AND TURKEY WORKSHOP

Devils Lake, ND

2010

Appendix A

MEMO TO: Midwest Directors
FROM: Midwest Deer and Wild Turkey Study Group
DATE: August 24, 2010
RE: Feeding and Baiting Resolution

Attached is a resolution adopted by the Midwest Deer and Wild Turkey Study Group at their annual meeting in Devils Lake, North Dakota, August 23-24, 2010. Additional supporting documentation and references are provided below.

Dr. William R. Davidson, assistant director of the Southeastern Center for Wildlife Disease Study (SCWDS) at the University of Georgia has stated "…science knows more than enough about the transmissible disease to realize we must not concentrate wildlife." "A key to prevention is to reduce or eliminate those risk factors that are controllable, and live animal importation, supplemental feeding, baiting, and other highly artificial practices are controllable risk factors." "Based on experience gained over several decades of work in the wildlife disease field at SCWDS, we believe that such actions are imperative if wildlife, domestic livestock and poultry, and human populations are to be safeguarded from unnecessary disease risks (Davidson and Fischer 2003)."

USDA research has shown that the bacteria responsible for causing TB can remain infectious for more than 17 weeks in frozen feed. This study terminated at 120-days with *M.bovis* bacteria still viable (Whipple and Palmer 2000). The prions that cause CWD will bind with soil particles (Johnson et al. 2007) and have been shown to infect mule deer at least two years later (Miller et al. 2004). Anthrax is believed to remain dormant in the soil for decades. Researchers believe that some areas of the country near historic cattle trails have a higher incidence of anthrax due to soils being infected from cattle drives in the late 1800s (Parker et al. 2007).

Repeated placement of food, minerals or attractants to a site to be consumed by deer and wild turkeys distinguishes these practices from any natural food source or feeding behavior. The practice of baiting congregates deer and wild turkeys, thus changing their distribution. These concentrations generally equate to the loss of opportunity and harvest by the general public since deer and wild turkeys are restricted to a few properties rather than more evenly distributed based on quality habitats. By artificially altering the distribution and behavior of deer and wild turkey, the ability of state and provincial agencies to effectively manage deer populations is also impacted. A study in Wisconsin revealed that deer harvest success during the gun season increased when baiting was banned (Van Deelen et al. 2006). Deer returned to natural distribution and movements that allowed the general public to harvest.

Bait and feed piles provide a situation where partially consumed feed, contaminated with saliva or nasal secretions from diseased animals, can be consumed and spread the disease to other deer (Miller et al. 2003). The TB bacterium can also be spread to humans through contact with saliva, urine, feces, milk, and improperly cooked meat of infected animals (Wiltkins et al. 2008). Blackhead and many other parasitic diseases affecting wild turkeys are spread via infected feces. Mortality rates of turkeys infected with blackhead disease usually exceeds 75%. In some instances concerns over disease by agricultural producers have resulted in the removal of the surviving turkeys after the disease has taken its toll on the flock. Grain used for bait or feeding can mold and be infected with aflatoxins or ergot toxins that can sicken and kill deer, turkeys, and a variety of other wildlife.

Once disease is established in wildlife populations, the cost to hunters and tax payers quickly escalates. Between 1994 and 2002, Michigan spent in excess of $150 million in an effort to control bovine tuberculosis (TB) in their deer herd, with an estimated annual cost to producers of $15 million for testing (Toso 2002). In Wisconsin, efforts to control Chronic Wasting Disease (CWD) have topped well over $32 million since 2001. Since 2005, the estimated cost of controlling TB in the northwestern Minnesota cattle and deer herd has now exceeded $10 million for testing cattle and another $3 to $5 million for testing and removal of deer.

Exceptions. Our resolution does not include feed that is:

A. present solely as a result of normal agricultural, forest management, orchard management, wildlife food planting or other similar land management practices; or

B. used for scientific purposes such as but not limited to population control or capture and handling of wildlife under written authorization from the responsible fish and wildlife agency. This section shall not be construed to limit employees of agencies of the state or province, or local animal control officers in the performance of their official duties related to public health, wildlife management, or wildlife removal; or

C. for the purpose of luring coyotes or furbearing animals for trapping as permitted by law.

Definitions. "Baiting" is defined as the placement and/or use of bait(s) for attracting deer, wild turkey and other game to a specific location for the purpose of hunting. Baits include but are not limited to grains, minerals, salts, fruits, vegetables, hay or any other natural or manufactured foods. This designation does not apply to the use of scents and lures, water, standing crops, or livestock feeds being used in standard farming practices. "Baited area" means any area where any "feed" is intentionally placed, deposited, distributed or scattered so as to lure, attract or entice wildlife to, on, or over a specific location. Such area shall remain a "baited area" for thirty days following complete removal of all "feed", except for salt, minerals, or any other "feed" that will dissolve and leach into the soil; in which case such area shall be considered as a permanently "baited area" until such time as all contaminated soil is either removed or covered in such a manner that the area no longer serves to artificially attract wildlife.

"Feeds" include but are not limited to grains, minerals, salts, fruits, vegetables, hay or any other natural or manufactured foods that are capable of luring, attracting or enticing wildlife.

"Feeding" means the intentional placement of food for deer, wild turkey, and other game animals to a specific location for any purpose (e.g. photographing or viewing, taming, providing nutritional supplements). This designation does not apply to the use of scents and lures, water, standing crops, or livestock feeds being used in standard farming practices.

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Appendix B

Resolution by the Midwest Deer and Wild Turkey Study Group regarding the detrimental consequences of the growing practice of baiting and feeding.

Our concerns focus primarily on the impacts of baiting and feeding on the transmission and spread of diseases and parasites in deer and wild turkey, the economic impacts of disease management and the subsequent ability of our agencies' to manage deer and wild turkey populations in light of these threats.

WHEREAS: Wildlife belongs to all citizens equally: method of take is entrusted to the state or province in consideration of the resource for the benefit of the public. AND

WHEREAS: Effective communication, education and enforcement are enhanced when rules and regulations are consistent across state and provincial boundaries. AND

WHEREAS: Baiting is not necessary to successfully harvest deer or wild turkey. AND

WHEREAS: Feeding is not necessary to sustain healthy deer and wild turkey populations. AND

WHEREAS: It is not possible to bait or feed deer and wild turkey without increasing the likelihood for the spread of diseases and parasites. AND

WHEREAS: Concentrating deer by baiting and feeding can facilitate the transmission, establishment, and spread of diseases such as chronic wasting disease, bovine tuberculosis, brucellosis, Johne's disease and parasites such as ticks, mites, and nematodes. AND

WHEREAS: Concentrating wild turkey by baiting and feeding can facilitate the transmission, establishment, and spread of diseases such as blackhead, avian pox and parasites such as ticks, lice, tape worms and round worms. AND

WHEREAS: Deer and wild turkey pathogens often remain viable at bait or feed sites long after the feed or bait no longer exists. AND

WHEREAS: Increased transmission and spread of diseases and parasites in deer and wild turkey may potentially put other wildlife and domestic livestock and public health at risk. AND

WHEREAS: Once certain diseases such as bovine tuberculosis become established in a deer population the cost of management dramatically increases thereby diverting limited public funds from traditional wildlife management activities. AND

WHEREAS: Feeding deer and wild turkey acclimates these animals to people which creates nuisance animals. Once the general public perceives a species as a nuisance, tolerance for and value of the species to society diminishes. AND

WHEREAS: The National Wild Turkey Federation technical committee resolution (1982) discourages the artificial feeding of turkeys, and the Wildlife Society position paper, *Baiting and Supplemental Feeding of Game Wildlife Species* (2007), discourages supplemental feeding and baiting of all wild game species. AND

WHEREAS: We acknowledge that feeding of wild ungulates has been a long tradition with some state, federal and provincial agencies dating back to the early 1900s. AND

WHEREAS: We acknowledge that banning baiting and feeding will not totally eliminate the possibility of disease transmission, establishment, and spread in free-ranging deer and wild turkey populations; but it is a positive, proactive step. AND

THEREFORE, BE IT RESOLVED: The Midwest Deer and Wild Turkey Study Group respectfully request the Midwest Directors representing member state and provincial wildlife agencies to:

1. collectively work to educate deer and wild turkey hunters, conservation organizations, the agricultural community and the general public as to the dangers and potential impacts resulting from baiting and feeding of deer and wild turkey; and
2. remain resolute in prohibiting the practice of baiting and feeding of deer and wild turkey in those states and provinces where baiting and feeding bans currently exist; and
3. prohibit baiting and feeding of deer and wild turkey in those states and provinces where those practices are currently allowed; and
4. communicate these concerns to the Association of Fish and Wildlife Agencies.