

2012 PROCEEDINGS MIDWEST DEER AND WILD TURKEY STUDY GROUP MEETING

*October 16-19, 2012
Custer State Park, SD*



Submitted by:

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South Dakota Department of Game, Fish, and Parks
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Background

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

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

Meeting Time and Place

The South Dakota Department of Game, Fish, and Parks (SDGFP) hosted the 2012 Midwest Deer and Wild Turkey Study Group Meeting at the Blue Bell Lodge in Custer State Park, South Dakota on October 16-19. The field trip on October 18 consisted of a visit to two local Game Production Areas in the Black Hills with a discussion led by retired SDGFP habitat manager Dennie Mann, and a hike at the Mount Rushmore National Monument and Sylvan Lake in Custer State Park.

The MDWTSG appreciates the financial support provided by the National Wild Turkey Federation and the Quality Deer Management Association to partially fund this meeting. Additional sponsors included the Mount Rushmore National Memorial Society (donated entrance fees to Mt. Rushmore), Custer State Park Resort Company (mints, lanyards), Eagle Sales of the Black Hills (refreshments), Cabela's (orange caps), and Mac Blais of Face Off Apparel and Graphics (logo design). Additionally, the NWTF donated door prizes for all attendees.

Attendance

Thirty-eight participants attended the workshop in 2012, including state deer and turkey biologists from 10 Midwest member states (Iowa, Illinois, Kansas, Michigan, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) and attendees from other organizations including the National Wild Turkey Federation, the Quality Deer

Management Association, South Dakota State University, Michigan State University, and the United States Forest Service. A complete list of attendees and contact information for deer and turkey state biologists are available in Table 1.

Executive Summary

Attendees at the 2012 Midwest Deer and Wild Turkey Study Group meeting were welcomed by Matt Snyder, Superintendent of Custer State Park, SDGFP (Appendix 1). Julie Brazell started the professional session by presenting a history of Custer State Park. Several other speakers addressed the attendees as a joint group prior to the separate deer and turkey breakout sessions. Professional presentations given during the joint session included the following:

- Teddy Roosevelt Award and TR Family Day
- Whitetail Deer Trustee: Review of Wisconsin's deer management system
- CPR for urban deer management objectives
- Update on the Midwest Wild Turkey consortium: where do we go from here?
- Providing public hunting on private lands
- Attitudes and opinions of deer and turkey hunters in South Dakota – 1990s to Today
- Technology advances in wildlife applications
- Mountain pine beetles
- South Dakota's rapidly changing landscape
- Energy development in western North Dakota

Numerous speakers presented timely information on issues related to deer and turkey research and management during individual deer and turkey breakout sessions. These topics included:

- Factors affecting survival of white-tailed deer in the Black Hills
- Aerial sightability of white-tailed deer and mule deer within various habitat types and geographical areas throughout South Dakota
- Captive cervid legislation: current status and proposed expansion
- Assessing Michigan deer hunter compliance with a baiting ban
- Discussion and input on Wisconsin's white-tailed deer review and recommendations
- Wild turkey in the Black Hills – past, present, and future
- Introduction to NWTF's Plains Riparian Initiatives
- Eastern turkey introductions in South Dakota – a historical perspective
- Regional effects of landscape-scale habitat and weather on wild turkey harvest potential

The group participated in numerous discussions throughout the course of the meeting. Participants in the breakout sessions delivered state status reports on deer or wild turkey for their state or province and discussion focused on management issues. All participating states and provinces provided copies of annual status reports for deer (Appendix 3) and turkey (Appendix 4).

Business Meeting

The Business Meeting was conducted as a joint session of the Deer and Wild Turkey groups on October 18, 2012 at 10 am. Several items of interest to the entire group were discussed as described below.

1. Future meeting location - as had been established at the 2011 Study Group Meeting at Roscommon, MI, Tom Micetich (Illinois Department of Natural Resources) confirmed that the 2013 meeting will be held in Illinois. No specific dates were proposed for the meeting. A complete list of past host states are available in Table 2.
2. Cooperative deer genetics research update - Tom Litchfield (Iowa Department of Natural Resources) provided the group with an update from a deer research project at Iowa State University. Tom had previously requested assistance with this project at the 2011 business meeting. The first year of the research project has been completed, with 7 mid-western states providing approximately 1400 genetic samples to Lynn Gardner, PhD candidate at Iowa State University. The degree of relatedness of deer through space and how this may influence the spread of disease are of interest in this project.
3. Wild Turkey Consortium - the Wild Turkey group proposed that a regional framework for data sharing and management may be of assistance to biologists at the business meeting in 2011. To enable the management of a regional database to store these data and process analyses, financial support from numerous states or provinces has already been secured. This topic and progress was further discussed and support during the business meeting was unanimous. A letter of support was drafted and sent to the Midwest directors (Appendix 2).
4. Feeding and Baiting Educational Materials - There was a lengthy discussion surrounding the need for additional materials regarding wildlife feeding and baiting and the negative consequences associated with those activities at the 2011 business meeting. This topic was also of interest to the Midwest Wildlife Health Committee, which subsequently produced an informational handout that was presented to the MAFWA directors. Although this handout will not be officially sanctioned by MAFWA, individual states can still use and distribute it as needed and approved by their administration. Dale Garner provided the group with the final electronic document produced by the Wildlife Health Committee.
5. MDWTSG past proceedings/business collection and storage - the idea of creating a central storage location of past meeting information was discussed. Items that could be collected included past proceedings, resolutions, briefing papers, email surveys, and other historical documents. Options for storage that were discussed included paper publications, compact disk, and/or website. Bill Jensen will work on collecting all previous proceedings and some historical documents to be put on a CD, Andy Lindbloom will further investigate the development of a website for the Midwest Deer and Wild Turkey study group. Some money may be available from MAFWA to produce these items.

6. Midwest Deer-Vehicle Collisions – There is a student at Michigan State interested in a geospatial statistical analysis of county level deer-vehicle collision data and traffic from across the region. States should expect to be contacted.
7. Acknowledgement of Lloyd Fox – after hearing that Lloyd was going to retire before next year's meeting (Lloyd could not be present for the business meeting), a motion was made to acknowledge Lloyd Fox for his successful career and substantial contributions to deer management and research in the Midwest.

Director Information Items

The Midwest Deer and Wild Turkey Study Group requests commitment by state Directors to support and encourage travel of state deer and turkey biologists to the annual Midwest Deer and Wild Turkey Workshop.

Table 1. List of participants of the 2012 Midwest Deer and Wild Turkey Study Group Meeting.

Last Name	First Name	Agency/Affiliation	State	Phone	Email
Baker	Nathan	South Dakota Game, Fish, and Parks	SD	605-223-7709	nathan.baker@state.sd.us
Bowling	Andrea	Michigan Department of Natural Resources	MI	517-432-0804	abowling@msu.edu
Brewer	Paul	Illinois DNR	IL	217-782-4377	paul.brewer@illinois.gov
Ermer	Jacquie	South Dakota Game, Fish, and Parks	SD	605-882-5203	jacquie.ermer@state.sd.us
Flinn	Emily	Missouri Department of Conservation	MO	573-815-7901 ext. 3619	emily.flinn@mdc.mo.gov
Fox	Lloyd	KS Wildlife, Parks & Tourism	KS	620-342-0658	lloyd.fox@ksoutdoors.com
Garner	Dale	Iowa DNR	IA	515-281-6156	dale.garner@dnr.iowa.gov
Hams	Kit	Nebraska Game and Parks	NE	402-471-5442	kit.hams@nebraska.gov
Isabelle	Jason	Missouri Department of Conservation	MO	573-815-7901 ext.3622	jason.isabelle@mdc.mo.gov
Jenks	Jonathan	South Dakota State University	SD	605-688-4783	jonathan.jenks@sdstate.edu
Jensen	Bill	North Dakota Game and Fish Department	ND	701-220-5031	bjensen@nd.gov
Kanta	John	South Dakota Game, Fish, and Parks	SD	605-394-2391	john.kanta@state.sd.us
Kohn	Stan	North Dakota Game and Fish Department	ND	701-328-6339	skohn@nd.gov
Lehman	Chad	South Dakota Game, Fish, and Parks	SD	605-255-4515	chad.lehman@state.sd.us
Lindbloom	Andy	South Dakota Game, Fish, and Parks	SD	605-223-7652	andy.lindbloom@state.sd.us
Litchfield	Tom	Iowa DNR	IA	641-774-2958	tom.litchfield@dnr.iowa.gov
Longmire	Cynthia	South Dakota Game, Fish, and Parks	SD	605-773-4231	cynthia.longmire@state.sd.us
Lusk	Jeff	Nebraska Game and Parks	NE	402-471-1756	jeff.lusk@nebraska.gov
Marsh	Chris	South Dakota Game, Fish, and Parks	SD	605-773-2868	christopher.marsh@state.sd.us
McCaffery	Keith	Wisconsin Dept. of Natural Resource	WI	715-365-2641	keith.mccaffery@wisconsin.gov
McKernan	Mike	NWTF SD State Chapter	SD	605-880-4221	mike.mckernan10@gmail.com
Micetich	Tom	Illinois DNR	IL	309-543-3316 ext.231	tom.micetich@illinois.gov
Norton	Mark	South Dakota Game, Fish, and Parks	SD	605-773-3096	mark.norton@state.sd.us
Pitman	Jim	KS Wildlife, Parks & Tourism	KS	620- 342-0658	jim.pitman@ksoutdoors.com
Robling	Kevin	South Dakota Game, Fish, and Parks	SD	605-394-1752	kevin.robling@state.sd.us
Rolley	Robert	Wisconsin Dept. of Natural Resource	WI	608-221-6341	robert.rolley@wisconsin.gov
Ross	Matthew	Quality Deer Management Association	NY	518-280-3714	mross@QDMA.com
Rudolph	Brent	Michigan Department of Natural Resources	MI	517-641-4903	rudolphb@michigan.gov
Rumble	Mark	United States Forest Service	SD	605-716-2174	mrumble@fs.fed.us

Table 1 continued

Last Name	First Name	Agency/Affiliation	State	Phone	Email
Schauer	Ron	South Dakota Game, Fish, and Parks	SD	605-362-2725	ron.schauer@state.sd.us
Shelton	Paul	Illinois DNR	IL	217-557-1052	paul.shelton@illinois.gov
Smith	Collin	National Wild Turkey Federation	SD	605-341-2479	csmith@nwtf.net
Snyder	Matt	South Dakota Game, Fish, and Parks	SD	605-255-4515	matt.snyder@state.sd.us
Stewart	Al	Michigan Department of Natural Resources	MI	517-241-3101	stewart1@michigan.gov
Tonkovich	Michael	ODNR, Division of Wildlife	OH	740-589-9922	mike.tonkovich@dnr.state.oh.us

Table 2. Previous Midwest Deer and Wild Turkey 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	Kellogg 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 - Feb 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 Park	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
2011	Michigan	Ralph A. MacMullen Center	September 25-28
2012	South Dakota	Custer State Park	October 16-19

Appendix 1. Agenda for the 2012 Midwest Deer and Wild Turkey Study Group Meeting, Custer State Park, South Dakota.

MEETING AGENDA
Midwest Deer and Wild Turkey Study Group
16-19 October 2012, Blue Bell Lodge
Custer State Park, South Dakota

TUESDAY – 16 OCTOBER

5:00 – 8:00 PM Registration
6:00 Evening social and buffet – Blue Bell Lodge Lounge

WEDNESDAY – 17 OCTOBER

7:00 AM Breakfast – Blue Bell Lodge Lounge
7:00 – 8:00 Registration

JOINT MEETING – WHITE BUFFALO ROOM

8:00 – 8:05 AM Opening remarks/logistics

8:05 – 8:10

Welcome to Custer State Park – Matt Snyder, Superintendent of Custer State Park, SDGFP

8:10 – 8:30

History of Custer State Park – Julie Brazell, Custer State Park Naturalist, SDGFP

8:30 – 8:50

TR Award and Teddy Roosevelt Family Day – Bill Jensen, Big Game Biologist, North Dakota Game and Fish Department

8:50 – 9:10

Whitetail Deer Trustee: Review of Wisconsin's Deer Management System – Robert E. Rolley, Wildlife Population Ecologist, Wisconsin Department of Natural Resources

9:10 – 9:30

CPR for urban deer management objectives – Brent Rudolph, Deer and Elk Program Leader, Michigan Department of Natural Resources

9:30 – 9:50

Update on the Midwest Wild Turkey Consortium: Where do we go from here
– Andrea Bowling, Ph.D. student / Graduate Research Assistant, Michigan State University

9:50 – 10:10

Providing public hunting opportunity on private land in South Dakota –
Mark Norton, Farm Bill & Hunting Access Coordinator, SDGFP

10:10 AM

Break

10:20 – 10:40

Attitudes and opinions of deer and turkey hunters in South Dakota – 1990s to Today – Cynthia Longmire, Human Dimensions Specialist, SDGFP

10:40 – 11:00

Technology advances in wildlife applications – Chris Marsh, Program Analyst, SDGFP

11:00 – 11:20

Mountain pine beetles – Chad Lehman, Senior Wildlife Biologist, SDGFP

11:20 – 11:40

South Dakota's rapidly changing landscape – Mark Norton, Farm Bill & Hunting Access Coordinator, SDGFP

11:40 – 12:00

Energy development in western North Dakota – Bill Jensen, Big Game Biologist, North Dakota Game and Fish Department

Noon

Lunch – Blue Bell Lodge Lounge

DEER BREAKOUT MEETING – WHITE BUFFALO ROOM

1:00 – 1:20 PM

Factors affecting survival of white-tailed deer in the Black Hills – Dr. Jonathan Jenks, Distinguished Professor of Natural Resource Management, South Dakota State University

1:20 – 1:40

Aerial sightability of white-tailed deer and mule deer within various habitat types and geographical areas throughout South Dakota – Kevin Robling, Big Game Biologist, SDGFP

1:40 – 2:00

Captive Cervid Legislation: Current Status and Proposed Expansion – Matt Ross, Certification Programs Manager, Quality Deer Management Association

2:00 – 2:20

Assessing Michigan Deer Hunter Compliance with a Baiting Ban – Brent Rudolph, Deer and Elk Program Leader, Michigan Department of Natural Resources

2:20 – 2:40

Discussion and input on Wisconsin's White-tailed deer review and recommendations – Robert E. Rolley, Wildlife Population Ecologist, Wisconsin Department of Natural Resources

2:40 – 3:00

State Reports

3:00 PM

Break – White Buffalo Room

3:20 – 5:00

State Reports

TURKEY BREAKOUT MEETING – BLUE BELL LODGE MEETING ROOM

1:00 – 1:20 PM

Wild turkeys in the Black Hills – past, present, and future – Mark Rumble, Research Wildlife Biologist, USFS Rocky Mountain Research Station; Chad Lehman, Senior Wildlife Biologist, SDGFP

1:20 – 1:40

Introduction to NWTF's Plains Riparian Initiatives – Collin Smith, Regional Biologist, National Wild Turkey Federation

1:40 – 2:00

Eastern Turkey Introductions in South Dakota – A Historical Perspective – Ron Schauer, Regional Wildlife Manager, SDGFP

2:00 – 2:20

Regional Effects of Landscape-Scale Habitat and Weather on Wild Turkey Harvest Potential – Andrea Bowling, Ph.D. student / Graduate Research Assistant, Michigan State University

2:20 – 3:00

State Reports

3:00 PM

Break – White Buffalo Room

3:20 - 5:00 PM

State Reports

6:00 PM

Supper – Blue Bell Lodge Lounge

THURSDAY – 18 OCTOBER

7:00 AM *Breakfast – Blue Bell Lodge Lounge*

DEER BREAKOUT MEETING – WHITE BUFFALO ROOM

8:00 – 10:00

State Reports

TURKEY BREAKOUT MEETING – BLUE BELL LODGE LOUNGE

8:00 – 10:00

State Reports

JOINT MEETING – WHITE BUFFALO ROOM

10:00 AM *Break – White Buffalo Room*

10:20 – noon

Business Meeting

Noon *Sack Lunch – departure for field trip*

1:00 – 5:00

Field Trip – Black Hills Management Areas

6:00 PM *Barbeque – Sylvan Lake Lodge*

7:00 PM *Travel back to CSP*

FRIDAY – 19 OCTOBER

7:00 AM *Breakfast – Blue Bell Lodge Lounge*

8:00 *Depart*

A big thank you to the sponsors below!

National Wild Turkey Federation – \$500

Quality Deer Management Association – \$500

Mount Rushmore National Memorial Society – entrance fees to Mt. Rushmore

Custer State Park Resort Company – mints, landyard

Eagle Sales of the Black Hills – refreshments for field trip

Cabelas – hunting caps

Please support our sponsors!



Appendix 2. Letter sent to the directors of the Midwest Association of Fish and Wildlife Agencies, intended to communicate unanimous support from the MDWTSG for the Midwest Consortium for Wild Turkey Monitoring and Research.



Dear MAFWA Directors,

The biologists, who form the Midwest Deer and Wild Turkey Study Group and were in attendance at the 36th annual workshop, fully endorse and support the Midwest Consortium for Wild Turkey Monitoring and Research. We feel that all member states will benefit immensely from such a region-wide understanding of the drivers of wild turkey population trends. The proposed project aligns with our management objectives in that we strive to sustainably manage wildlife populations. The best available science, which the consortium will provide, is a necessary part of sustainable wild turkey management.

Sincerely,

Midwest Deer and Wild Turkey Study Group Members

Appendix 3. Annual deer status reports submitted by participant states and provinces at the MDWTSG meeting in 2012, South Dakota.

Agency Deer Reports



Midwest Deer and Wild Turkey Study Group
16-19 October 2012, Blue Bell Lodge
Custer State Park, South Dakota

Illinois Deer Report 2012 Midwest Deer Study Group

Automated harvest reporting system for deer and wild turkey serves us well. The few duplicate records found in the deer harvest database are mostly muzzleloader hunters who kill deer during the 2nd Firearm Deer weekend in manned deer check counties. Muzzleloader hunters may use electronic harvest reporting, or bring their animal to a manned deer check station for Chronic Wasting Disease sampling during that weekend. Some do both, hence the duplication.

The deer harvest report format contains detailed current year information and summaries of the prior four years. With the background tables, it is updated rather efficiently. (Copy provided) Final reports for hunting years 2005-06 through 2011-12 can be found at:
<http://www.dnr.illinois.gov/hunting/deer/Pages/AnnualDeerHarvestReports.aspx>

Chronic Wasting Disease (CWD): 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. Nine check stations served ten counties (Jo Daviess was added 2011-12). Contracting with cooperating meat lockers and others provided samples from downstate. We sampled 8,203 animals (highest number to-date), statewide, and had a decrease in CWD-positives with 36 during our 2011-12 campaign (down from 42 in 2010-11). Hunters scored 10, while DNR sharpshooters removed 23; other sharpshooters removed 2; and one road-kill/incidental positive. There have been 372 positives discovered since 2002 from the following sources: hunters, 170; sharpshooters, 176; suspects, 22; and road-kill/incidental, 4. We had no new counties reporting positive animals in 2011-12. All new sections were well within “walking distance” of prior positive sections. More information on Illinois CWD can be found at:
<http://dnr.state.il.us/cwd/>

Nuisance Deer Removal Permits (DRP): Requests for permits to alleviate damage due to deer, and permits issued seem to have stabilized below the drought year peak of 2007; and “success” has dropped since 2006. In 2011, we had 260 permits issued which authorized removal of 2,037 deer from 58 counties. A total of 1,234 were taken (60.6%).

Deer Population Control Permits (DPCP): These permits are issued to land management agencies, municipalities, homeowner associations, federal entities, and airports for controlling deer in areas not suited to, or where traditional means have been insufficient to control deer numbers. Forty-one permits (highest number to-date) were issued (2 not used/implemented) to 16 entities in 7 counties. There were four new sites permitted. Of the 2,237 deer authorized, 1,687 were collected (75.4%).

Epizootic Hemorrhagic Disease, 2012: We had 661 citizen reports of 2,043 dead/dying deer from 76 counties through the end of September. Highest numbers were reported from Cook (326); Calhoun (181); Coles (138); Macon and Shelby (tie, 121). EHDV-6 was isolated from several animals. Our last major outbreak was in 2007, when we had 458 calls reporting 1,987 dead deer from 57 counties. EHDV-2 was isolated at that time.

Changes implemented in 2011-12:

All CWD-positive counties were included in the CWD deer season, bringing the total to 10 (up from five). NO MANNED DEER CHECK during this season 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 five new counties had previously been included in the concurrent late-winter deer season. The main difference is that the 2-antlered deer limit is waived for CWD season. All CWD season permits were available over-the-counter as “antlerless” so any antlered animals must have been taken with left-over “either-sex” permits issued for an open county.

Lee County was added to the late-winter deer season – due to its proximity to CWD-positive animals on three sides.

Single either-sex archery permits were issued from Springfield “the old fashioned way” via paper application, with a limit of one, and a 1 September deadline. We had 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. There were 319 of these “new” permits issued in 2011-12.

Changes proposed for 2012-13:

An active legislative session had multiple earn-a-buck and weapons proposals. In the end, only a crossbow compromise with bow hunters made it through the process.

Crossbows will be legal for anybody of any age with or without a physical disability to utilize a crossbow for any species (including, deer, turkey, squirrel, upland game) which may be legally taken by bow and arrow *following the 2nd firearm season through the close of the archery deer season*. Those 62 and older, as well as younger hunters with physical limitations and a crossbow permit, may use a crossbow throughout the open seasons for which a bow and arrow is legal weaponry.

Forest Wildlife staff recommended the removal of 10 counties from the Late-Winter Antlerless Only Deer Season (56 remain open). Each had reached the goal established by the Legislative Deer Task Force in their 2008 recommendations to the director.

The first CWD-positive deer was discovered in a Kendall County deer in July, 2012. We will be adding this county to the CWD season in December/January; bringing the number of open counties to 11.

ILLINOIS -- Yearly Deer Harvest, 1995 - 2011 (includes Percent Female & Percent Antlerless)													
Year	Youth Permits	Youth Harvest	Youth %F; %AO	Archery Harvest	Archery %F; %AO	Either-sex Permits	Firearm Harvest	M-L E/S Permits	Muzzle-Ldr Harvest	Late-Winter Harvest	Firearm % F; % AO	Combined % F; % AO	Total
1995		N/A		34,491	44; N/A	190,806	105,067	5,428	846	1,829	43.9; N/A	43.9; N/A	142,233
1996		N/A		35,239	44; N/A	193,319	94,853	6,438	970	1,675	45.8; N/A	45.3; N/A	132,737
1997		N/A		36,763	42; N/A	189,092	93,621	6,192	1,114	1,776	44.8; N/A	44.0; N/A	133,274
1998		N/A		36,328	44; N/A	185,412	95,608	6,043	1,227	2,173	43.7; N/A	43.8; N/A	135,336
1999		N/A		41,310	43; N/A	191,047	92,196	6,190	1,309	1,719	41.2; N/A	41.7; N/A	136,534
2000		N/A		42,900	44; N/A	191,760	103,221	6,550	1,361	2,178	41.4; N/A	42.2; N/A	149,660
2001	1,039	298	75.2; 100	47,858	44; N/A	194,312	101,304	6,210	1,507	2,099	40.3; N/A	41.5; N/A	153,066
2002	1,512	308	76.8; 99.4	51,660	45; N/A	194,712	104,478	6,189	1,292	2,120	42.7; N/A	43.5; N/A	159,858
2003	2,015	383	73.9; 99.5	57,802	43; N/A	197,178	105,873	14,448	3,037	1,667	41.3; N/A	41.9; N/A	168,762
2004	2,358	612	74.2; 98.7	63,639	47; N/A	199,905	116,675	15,708	3,535	5,995	43.3; N/A	44.6; N/A	190,456
2005	3,109	1,065	77.3; 99.5	66,093	47.4; 59.7	208,148	123,792	19,998	4,879	5,380	45.0; 59.8	45.7; 59.7	201,209
2006	3,654	1,100	79.2; 99.7	64,770	50.6; 62.2	209,675	114,722	20,881	5,973	9,676	43.9; 57.6	46.1; 59.1	196,241
2007	5,205	898	53.6; 69.8	64,155	49.2; 60.1	212,127	117,755	24,172	4,387	12,415	45.2; 58.8	46.4; 59.2	199,610
2008	5,960	1,045	49.5; 64.5	64,920	50.4; 60.6	211,393	106,018	26,093	4,366	12,552	49.4; 62.7	49.7; 62.0	188,901
2009	8,085	2,409	51.8; 64.5	64,819	50.5; 60.6	211,951	99,755	26,390	4,745	17,906	50.4; 64.6	50.5; 63.2	189,634
2010	8,996	1,544	48.8; 61.1	63,570	50.4; 60.3	211,706	98,944	26,374	3,328	14,884	49.2; 63.0	49.6; 62.1	182,270
2011	8,999	1,849	48.1; 62.4	61,974	50.4; 60.1	210,828	97,820	26,967	4,902	14,906	43.6; 61.7	49.2; 61.1	181,451

2-buck

2011 Firearm and Muzzle-loader Seasons open in 99 of 102 Illinois Counties

2011 Archery Deer Season was open in all 102 Illinois Counties

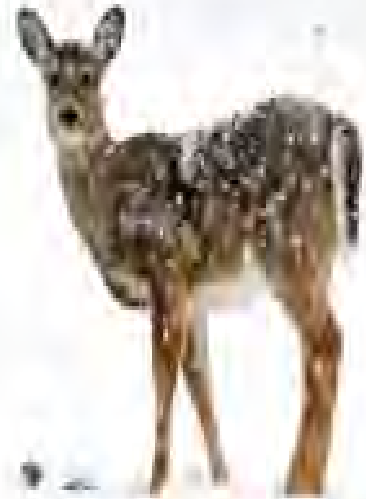
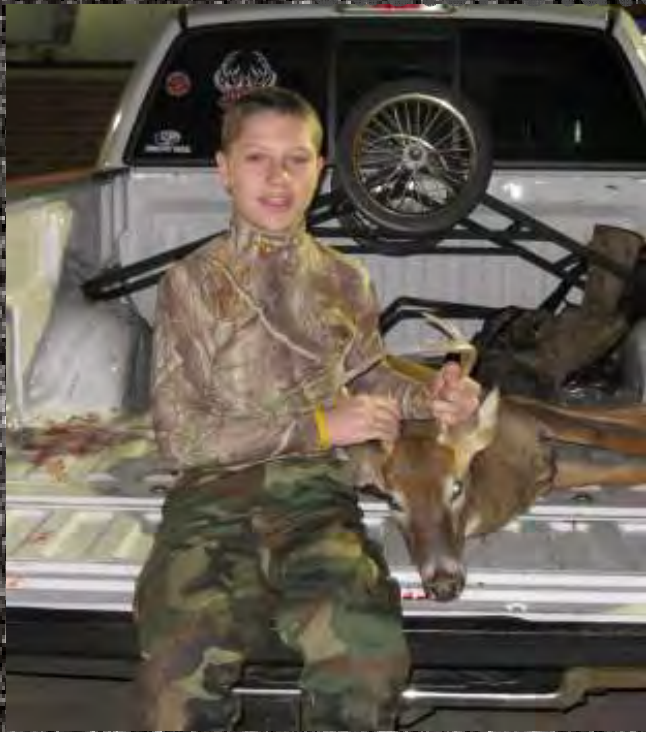
2011 Youth Firearm Deer Season was open in 99 Illinois Counties for any deer.

Late-Winter was open in 66 Illinois Counties; Unfilled firearm permits were allowed again this year.

10 additional counties were open to CWD Season which was concurrent with late-winter season and harvest included there.

rev. 09/12/2012

2011 Indiana Deer Season Summary Report to the Midwest Deer and Turkey Study Group Custer State Park, SD 2012



Prepared by: **Chad M. Stewart**



Photo by: John Maxwell, IDNR

“Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children's children. Do not let selfish men or greedy interests skin your country of its beauty, its riches or its romance.”—Theodore Roosevelt

2011 Indiana Deer Harvest Summary

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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 2011 Indiana deer hunting season was comprised of four seasons: Early Archery (Oct. 1 to Nov. 27), Firearms (Nov. 12 to Nov. 27), Muzzleloader (Dec. 3-18), and Late Archery (Dec. 3 to Jan. 1). Additionally, there was a youth-only season Sept. 24-25 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 either sex 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 15th year the crossbow was legal for hunting by non-disabled 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, archery, or bonus antlerless deer 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. 27), and continued again into January (Dec. 3 to Jan. 1). 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 firearm (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 owned were exempt from purchasing deer licenses, as were lessees who farmed the land.

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. 24 to Nov. 27) plus the late archery and muzzleloader seasons.

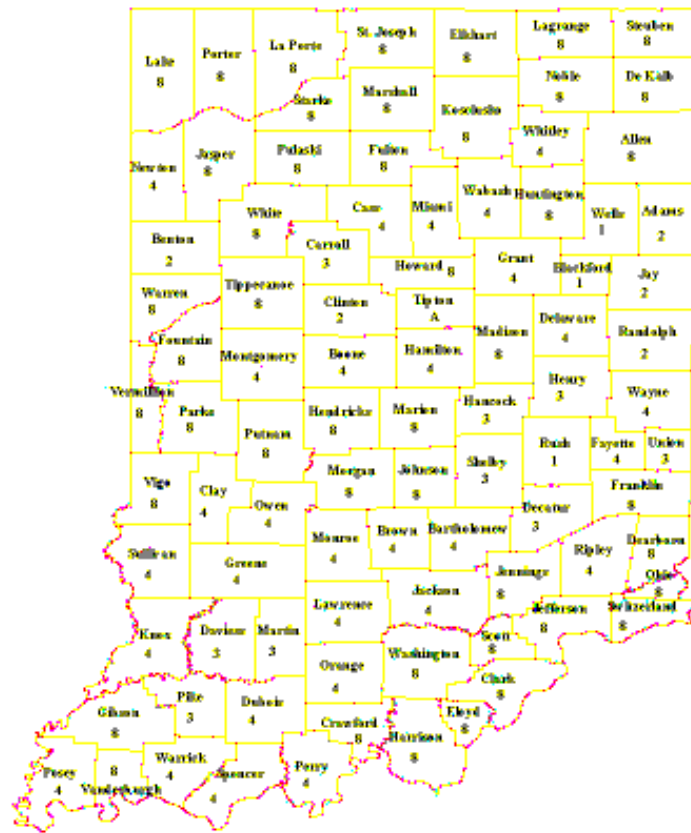


Figure 1. Antlerless deer bag limits in 2011.

Deer Harvested by Season

A total of 129,018 deer were legally harvested in Indiana during the 2011 season (Figure 2). This harvest was 4% lower than the 134,004 deer harvested during the 2010 season. The antlered deer harvest of 50,717 was 4% less than the 53,007 harvested last year. The antlerless harvest of 78,301 was 3% less than the 80,997 harvested in 2010. In 2011, the harvest for total deer and antlerless deer ranks as the fourth highest reported kill for each category in history. The antlered harvest ranks seventh all-time.

Approximately 2.99 million deer have been legally harvested during the past 60 deer hunting seasons in Indiana.

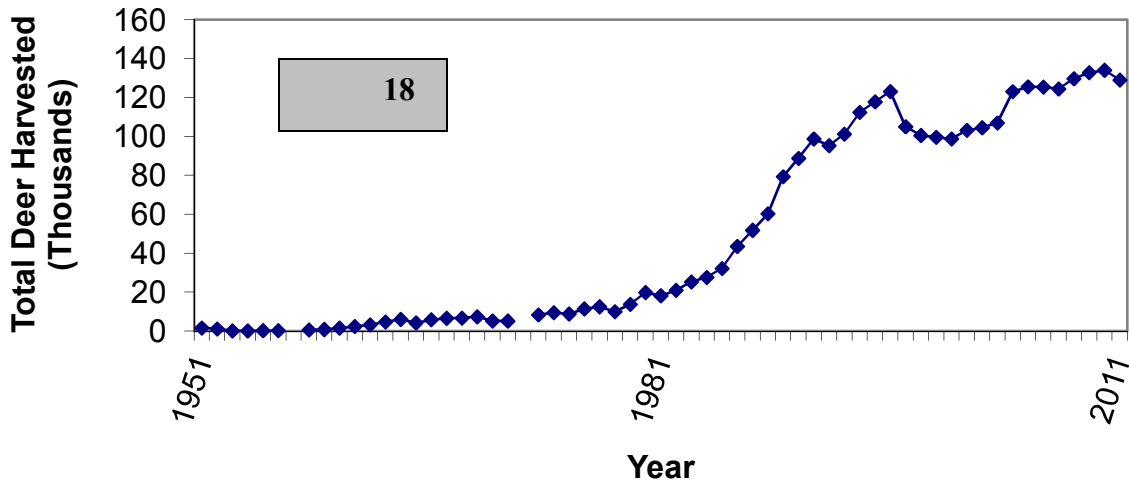


Figure 2. The number of deer harvested in Indiana deer hunting seasons 1951-2011.

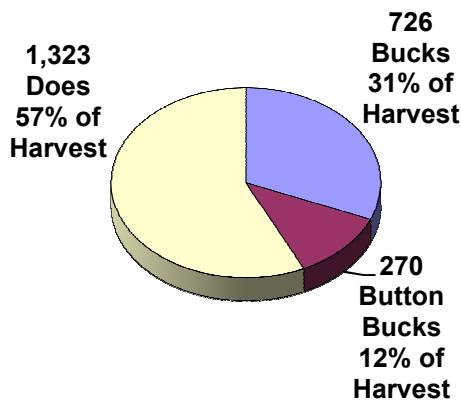


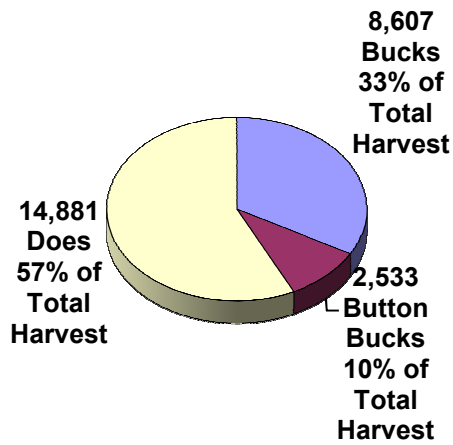
Figure 3. 2011 Youth Season harvest composition

The hunting season began with urban deer zones (Sept. 15) followed by a youth only weekend (Sept. 25-26). This season was created in 2006 and allowed youths 15 years and younger to harvest one antlerless deer. It was changed in 2009 to include all youths 17 years and younger. This year was the 2nd year youths could harvest an antlered deer during this season. A total of 2,319 deer were harvested in 2011 during this season, down 0.8% from the 2,337 from 2010. This season resulted in 2% of the total harvest (Table 1). Bucks made up 31% of the harvest, while 12% of the harvest was comprised of button bucks (Figure 3).

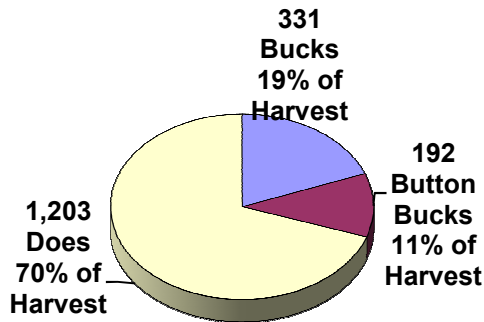
The early archery season harvest (including the early Urban Deer Zones) of 26,021 deer comprised 20% of the total harvest and was just over 1% less than the 26,342 harvested in 2010 (Table 1). The late archery season comprised 1% of the total harvest, similar to the 2010 season. The combined archery seasons yielded 27,747 deer, a decrease of 1% from the 28,026 harvested in 2010. Antlerless deer comprised 68% of the total archery harvest, up 1 percentage point from 2010. Antlerless harvest in early archery season was 67%, while in late archery it was 81% (Figure 4). Does made up 57% of the total harvest in early archery season and nearly 70% of the harvest in late archery season. The late urban season that was instituted for the first time this year accounted for a total of 63 deer, 87% of which were antlerless.



A.



B.



and B. Late
1

Table 1. Number of deer harvested in each segment of the 2011 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 (24-25 Sept)	726 (1)	1,593 (2)	2,319 (2)
Early Archery* (1 Oct - 27 Nov)	8,607 (17)	17,414 (22)	26,021 (20)
Firearms (12-27 Nov)	37,281 (74)	42,436 (54)	79,717 (62)
Muzzleloader (3-18 Dec)	3,772 (7)	15,463 (20)	19,235 (15)
Late Archery* (3 Dec - 1 Jan)	331 (1)	1,395 (2)	1,726 (1)
Totals	50,717	78,301	129,018

*Includes Urban Deer Zones

The firearms season harvest of 79,717 deer was a decrease of nearly 7.5% from the 86,241 deer harvested in 2010 and comprised 62% of the total harvest (Table 1). The antlerless harvest of 42,436 was 8% less than the 2010 antlerless harvest of 46,243, while the antlered harvest of 37,281 was 6% less than the antlered deer harvest in 2010 (39,818). Antlered deer made up at least half of the total harvest on only the first five days of firearm season, while antlerless deer outnumbered antlered deer during the remaining 11 days of the season (Table 2). During the opening weekend of firearms season, 42% of the total firearm season harvest occurred, down slightly from 44% in 2010. Opening weekend contributed to 26% of the statewide total harvest for all seasons, which is 2 percentage points less than the opening weekend harvest from 2010. Antlerless deer comprised 54% (82% of which were does) of the firearm season harvest (Figure 5).

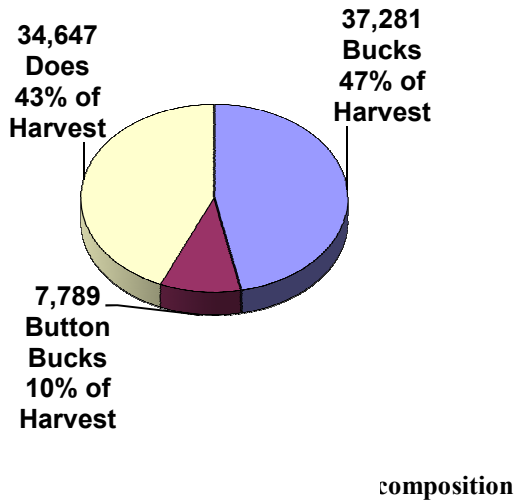
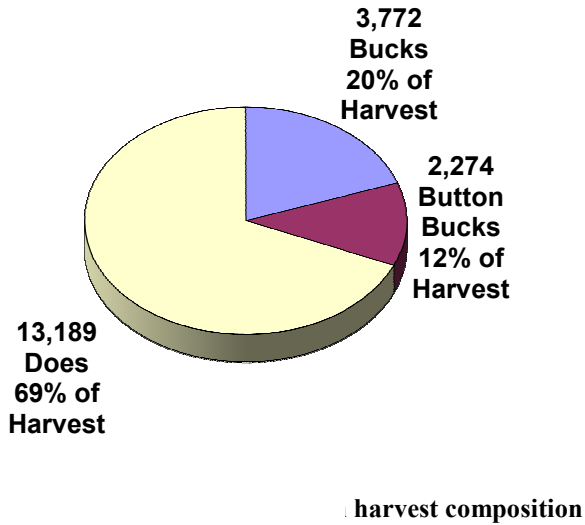


Table 2. Number of deer harvested on each day of the 2011 Indiana firearm season (includes deer taken by bow, shotgun, pistol, rifle, and muzzleloader).

Date	Day	Antlered		Antlerless		Total	
		N	Daily %	N	Daily %	N	Total %
12 November	Sat	14,405	56	11,396	44	25,801	32
13 November	Sun	4,302	53	3,857	47	8,159	10
14 November	Mon	1,374	54	1,192	46	2,566	3
15 November	Tue	1,625	51	1,577	49	3,202	4
16 November	Wed	1,787	50	1,779	50	3,566	4
17 November	Thu	1,817	46	2,116	54	3,933	5
18 November	Fri	1,754	43	2,322	57	4,076	5
19 November	Sat	3,066	42	4,245	58	7,311	9
20 November	Sun	1,656	43	2,229	57	3,885	5
21 November	Mon	634	39	986	61	1,620	2
22 November	Tue	277	34	535	66	812	1
23 November	Wed	867	36	1,525	64	2,392	3
24 November	Thu	1,052	35	1,991	65	3,043	4
25 November	Fri	1,437	30	3,405	70	4,842	6
26 November	Sat	1,219	29	3,029	71	4,248	5
27 November	Sun	422	31	956	69	1,378	2
Totals*		37,694		43,140		80,834	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.

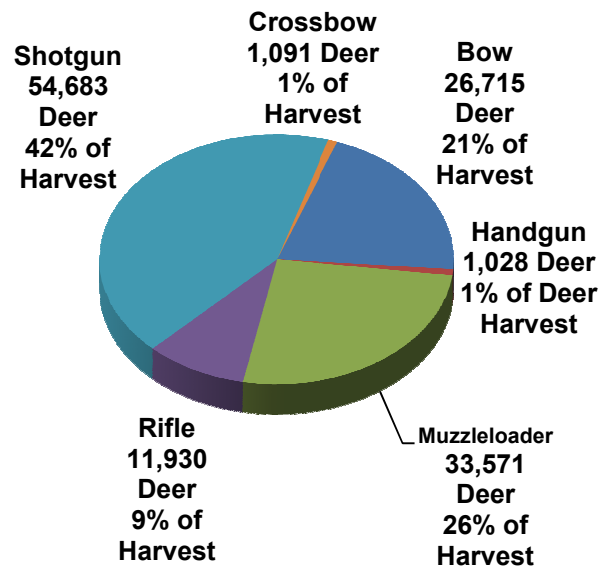
The muzzleloader season harvest of 19,235 comprised 15% of the total harvest, up 2 percentage points from last year (Table 1). This year's muzzleloader season harvest was 10.5% higher than the 2010 muzzleloader harvest (17,400). As in years past, a large percentage of the deer harvested during the muzzleloader season were antlerless (81%) (Figure 6).



Harvest by Equipment Type

Six types of equipment were legal for hunting deer during 2011: 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%, 42%, 26%, 1%, 1%, and 9% of the total deer harvest, respectively (Figure 7). Shotgun harvest decreased 12% from 2010. Harvest by muzzleloader was nearly equal to 2010, while bow and handgun decreased 2% and 22% from 2010, respectively (Table 3).

The total crossbow harvest for the year, including deer taken on disabled hunter crossbow permits, was 1,091 animals, an 18% increase from 2010. During the late archery season, the crossbow harvest was 248 deer, compared with 172 in 2010 and 182 in 2009 (Table 3). Nearly 27% of deer taken in the first late urban deer season were taken with crossbows.



equipment type in Indiana

Table 3. Number of deer harvested by type of legal hunting equipment during the 2006-2011 seasons. Approximate percent of total harvest shown in parentheses.

Equipment type	2006	2007	2008	2009	2010	2011
Bow*	26,723 (21)	26,187 (21)	26,369 (20)	28,497 (21)	27,186 (20)	26,715 (21)
Shotgun	66,304 (53)	63,919 (51)	68,520 (53)	65,839 (50)	61,920 (46)	54,683 (42)
Muzzleloader	30,247 (24)	30,740 (25)	30,295 (23)	32,745 (25)	33,527 (25)	33,571 (26)
Handgun	1,386 (1)	1,615 (1)	1,949 (2)	1,932 (1)	1,318 (1)	1,028 (1)
Rifle	x	1,203 (1)	1,788 (1)	2,809 (2)	9,125 (7)	11,930 (9)
Crossbow						
Disabled	591 (0)	609 (0)	668 (1)	748 (1)	756 (1)	843 (1)
Late archery	130 (0)	154 (0)	159 (0)	182 (0)	172 (0)	248 (0)
Totals	124,562	124,427	129,748	132,752	134,004	129,018

* 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 80% of the total deer harvest (Table 4). Licensed nonresident hunters harvested over 2% of the total harvest. Hunters with a regular yearly deer hunting license (resident plus non-resident) took only ~46% 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 over 54% 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 ~17% of the total deer harvest. Of the deer harvested by license-exempt hunters, nearly 98% were taken by landowners/tenants while only 2% by military personnel on leave.

Table 4. Harvest distribution of deer by license type during 2011 hunting season.

License Status	Deer Harvested	Percent of Harvest
Resident	55,802	43.25
Lifetime	35,780	27.73
Land Owner	21,551	16.70
Youth	12,503	9.69
Nonresident	2,965	2.30
Military	417	0.32
Total	129,018	100.0

Harvest Age and Sex Structure

The age and sex structure of the 2011 deer harvest was 39% adult males (antlered bucks), 29% adult females, 10% male fawns (button bucks), and 21% female fawns (Table 5). The proportion of female fawns in the harvest was reported higher this year than in previous seasons, which is determined through check station observations. About 39% of the antlered bucks and 36% of the adult does harvested during 2011 were yearlings (1.5 years old) (Figure 8).

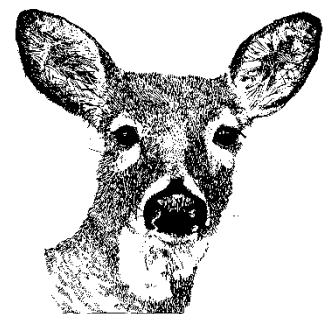


Table 5. Sex and age structure of the Indiana deer harvest during 1987-2011, as determined from mandatory check stations.

Year	Adults		Fawns		Total
	Males (%)	Females (%)	Males (%)	Females (%)	
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	52,878 (40)	48,222 (36)	13,040 (10)	18,291 (14)*	132,431
2010	53,007 (40)	49,911 (37)	13,367 (10)	17,719 (13)*	134,004
2011	50,717 (39)	37,776 (29)	13,058 (10)	27,467 (21)*	129,018

* 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).

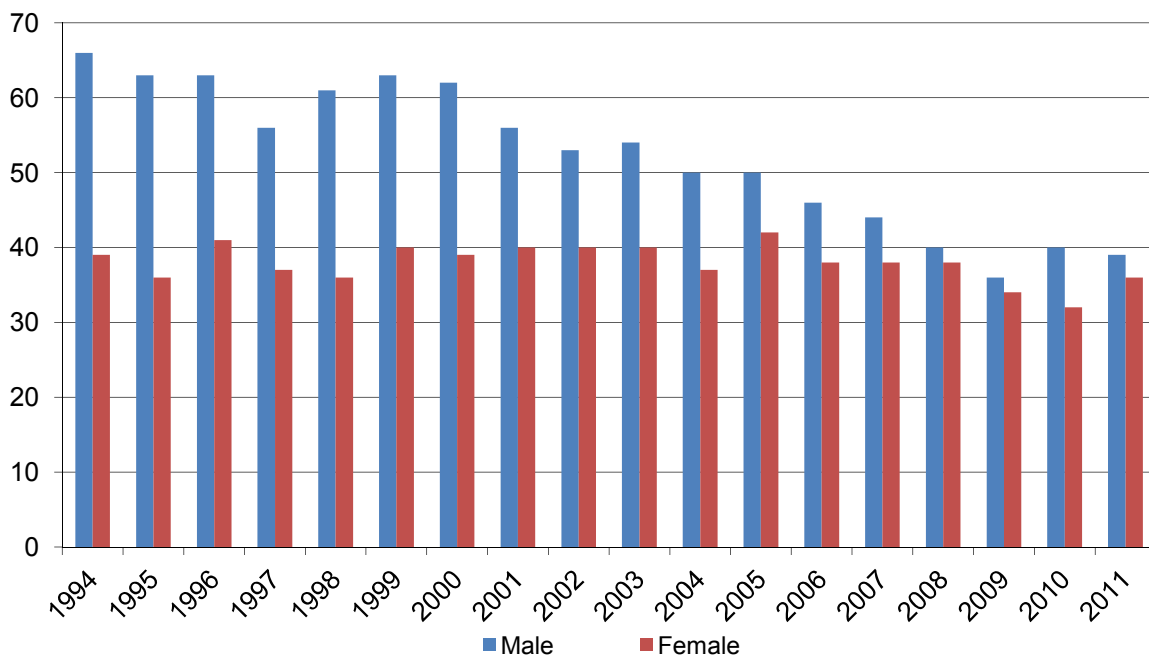


Figure 8. Proportion of male and female yearlings in the harvest (1.5 years old), as determined by aging during the first weekend of the firearms season, for years 1994-2011.

Deer License Sales

Deer license sales increased this year from 2010 by 3%, up from 268,485 (Table 6). Youth licenses increased nearly 2% from 2010. License sales from all categories were up, with military/refuge licenses and muzzleloader licenses showing the greatest increases at 23.5% and 9%, respectively. Resident Firearm licenses comprised the largest proportion deer licenses sold (37%), followed by Bonus Antlerless licenses (26.5%).

Table 6. Deer license sales in Indiana by type, 2009-2011*.			
	2009	2010	2011
Resident Archery/Extra Archery	58,751	59,473	60,844**
Resident Firearm	105,158	102,626	103,284
Resident Muzzleloader	23,363	21,975	23,956
Resident Military/Refuge	2,721	2,541	3,138
Resident Bonus Antlerless	71,515	70,673	73,287
Nonresident	10,443	11,197	11,889
Youth	38,254	38,330	39,030
Total (excluding Youth)	271,951	268,485	276,398

*Total numbers subject to change slightly via refunds or voids

**Includes urban deer zone licenses sold in January



Distribution of the Harvest

The number of deer harvested in individual counties ranged from 90 in Tipton County to 3,532 in Steuben County (Table 7). Harvest exceeded 1,000 deer in 62 counties; 2,000 deer in 14 counties; and 3,000 deer in four counties. The antlered buck harvest exceeded 1,000 in five counties (down from nine in 2010), while the antlerless harvest exceeded 1,000 deer in 31 counties compared with 34 in 2010. Antlerless deer comprised at least 50% of the total harvest in 91 of the state's 92 counties in 2011 compared with 89 counties in 2010. The counties with the highest harvests were Steuben, Switzerland, Kosciusko Noble, Dearborn, Franklin, Harrison, Washington, Parke, and Lagrange. The counties with the lowest harvests were Tipton, Benton, Hancock, Marion, Blackford, Rush, Clinton, Shelby, Howard, and Boone.

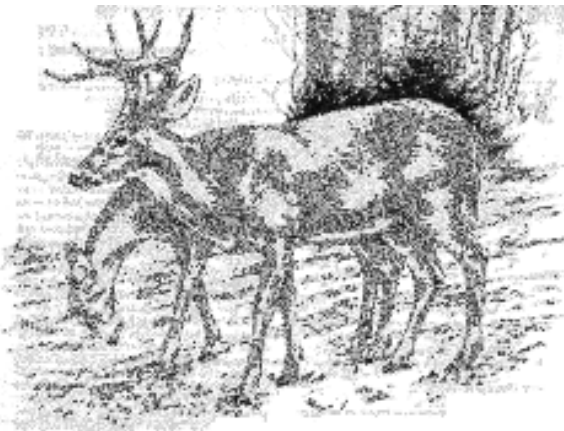


Table 6. Number of deer harvested in each Indiana county during 2011 (after adjustment for unknowns).

County	Number Harvested			County	Number Harvested		
	Antlered	Antlerless	Total		Antlered	Antlerless	Total
Adams	209	279	488	Lawrence	828	1,146	1,974
Allen	684	990	1,674	Madison	217	360	577
Bartholomew	455	664	1,119	Marion	152	177	329
Benton	90	54	144	Marshall	920	1,582	2,502
Blackford	142	192	334	Martin	706	950	1,656
Boone	216	244	460	Miami	578	883	1,461
Brown	640	1,037	1,677	Monroe	523	838	1,361
Carroll	353	562	915	Montgomery	515	689	1,204
Cass	555	794	1,349	Morgan	508	736	1,244
Clark	651	1,051	1,702	Newton	413	550	963
Clay	505	599	1,104	Noble	989	2,036	3,025
Clinton	164	200	364	Ohio	396	733	1,129
Crawford	771	1,154	1,925	Orange	797	1,141	1,938
Daviess	411	701	1,112	Owen	715	950	1,665
Dearborn	979	1,906	2,885	Parke	960	1,601	2,561
Decatur	282	445	727	Perry	736	1,036	1,772
DeKalb	894	1,414	2,308	Pike	695	862	1,557
Delaware	314	431	745	Porter	523	809	1,332
Dubois	698	1,173	1,871	Posey	554	870	1,424
Elkhart	553	958	1,511	Pulaski	675	1,046	1,721
Fayette	353	502	855	Putnam	892	1,325	2,217
Floyd	288	424	712	Randolph	261	406	667
Fountain	575	959	1,534	Ripley	744	1,091	1,835
Franklin	1,008	1,868	2,876	Rush	172	191	363
Fulton	713	1,115	1,828	St. Joseph	527	849	1,376
Gibson	572	878	1,450	Scott	360	561	921
Grant	352	470	822	Shelby	168	228	396
Greene	778	1,200	1,978	Spencer	583	715	1,298
Hamilton	200	316	516	Starke	636	1,081	1,717
Hancock	112	174	286	Steuben	1,227	2,305	3,532
Harrison	1,083	1,597	2,680	Sullivan	840	1,077	1,917
Hendricks	284	335	619	Switzerland	1,148	2,161	3,309
Henry	246	330	576	Tippecanoe	600	685	1,285
Howard	161	289	450	Tipton	43	47	90
Huntington	491	664	1,155	Union	233	360	593
Jackson	761	1,206	1,967	Vanderburgh	340	430	770
Jasper	588	909	1,497	Vermillion	581	799	1,380
Jay	342	578	920	Vigo	625	882	1,507
Jefferson	891	1,364	2,255	Wabash	701	1,097	1,798
Jennings	745	1,217	1,962	Warren	515	756	1,271
Johnson	277	408	685	Warrick	568	787	1,355
Knox	359	387	746	Washington	953	1,652	2,605
Kosciusko	1,079	2,044	3,123	Wayne	482	639	1,121
Lagrange	807	1,716	2,523	Wells	225	248	473
Lake	485	572	1,057	White	465	768	1,233
La Porte	792	1,037	1,829	Whitley	522	757	1,279

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

Disease Monitoring

Epizootic Hemorrhagic Disease

Nine counties received credible reports of dead or dying deer due to Epizootic Hemorrhagic Disease (EHD) in Indiana in 2011 (Figure 9). EHD was confirmed through laboratory testing in Vermillion and Posey County. Overall impact from this outbreak appears to be minimal. The last major outbreak of EHD in Indiana occurred in 2007, and had far greater impact on the deer herd than the event seen this year.

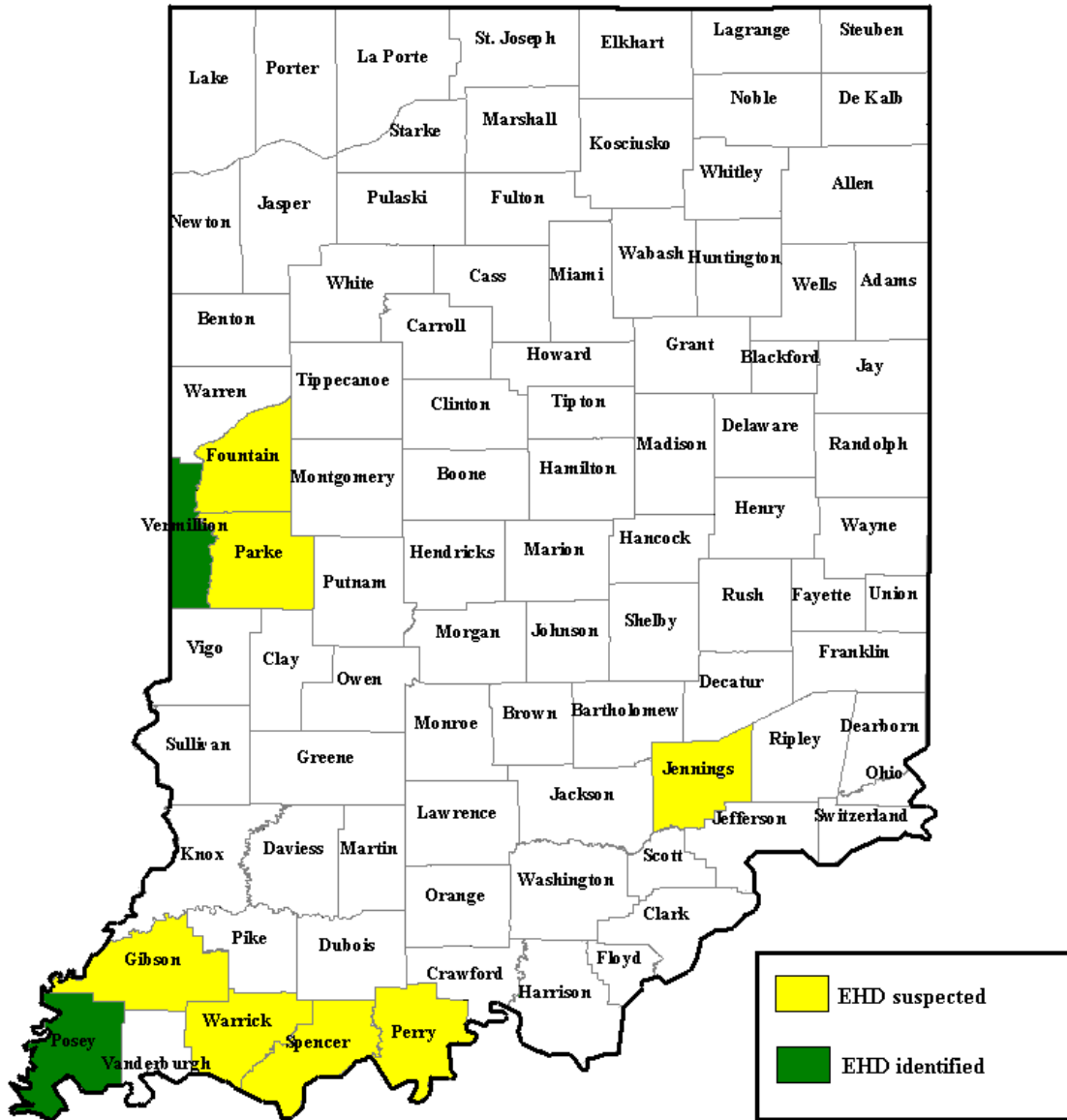


Figure 9. Counties in Indiana with reports of EHD in 2011.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is one of a group of diseases called Transmissible Spongiform Encephalopathies, 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 Missouri, 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 2011 CWD sampling failed to detect the presence of CWD in 869 deer sampled from hunter harvested and road killed deer. CWD has not been detected in over 12,200 deer during this monitoring period.

Bovine Tuberculosis

The Indiana Division of Fish and Wildlife, along with the help of the Indiana Division of Law Enforcement, Indiana Board of Animal Health, and the United States Department of Agriculture, participated in the collection and testing of free ranging white-tailed deer for Bovine Tuberculosis (TB) in 2011. A total of 366 deer were sampled from Franklin, Fayette, and Dearborn County, and culturing from the National Veterinary Services Laboratory is complete and failed to detect the presence of TB in any free ranging deer this year. Indiana has tested over 900 deer for TB during the past three years and has failed to detect the presence of TB in the free ranging deer herd.

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



- **Archery season**

- There is no longer a break between early and late archery season. The archery season is now continuous, beginning Oct. 1 and continuing through the first Sunday in January (Figure 1).

- **Special Antlerless Deer Only firearms season**

- A special antlerless deer only firearm season is established from Dec. 26 through the first Sunday in January in counties with a bonus antlerless quota of 4 or more.
- Hunters would need to use a bonus antlerless license, deer license bundle, lifetime comprehensive hunting, lifetime comprehensive hunting and fishing, resident youth hunt/trap license, or meet a license exemption.
- Deer harvested during this season count toward the bonus antlerless county quota limit. The bonus antlerless county quotas will be available in July, 2012.

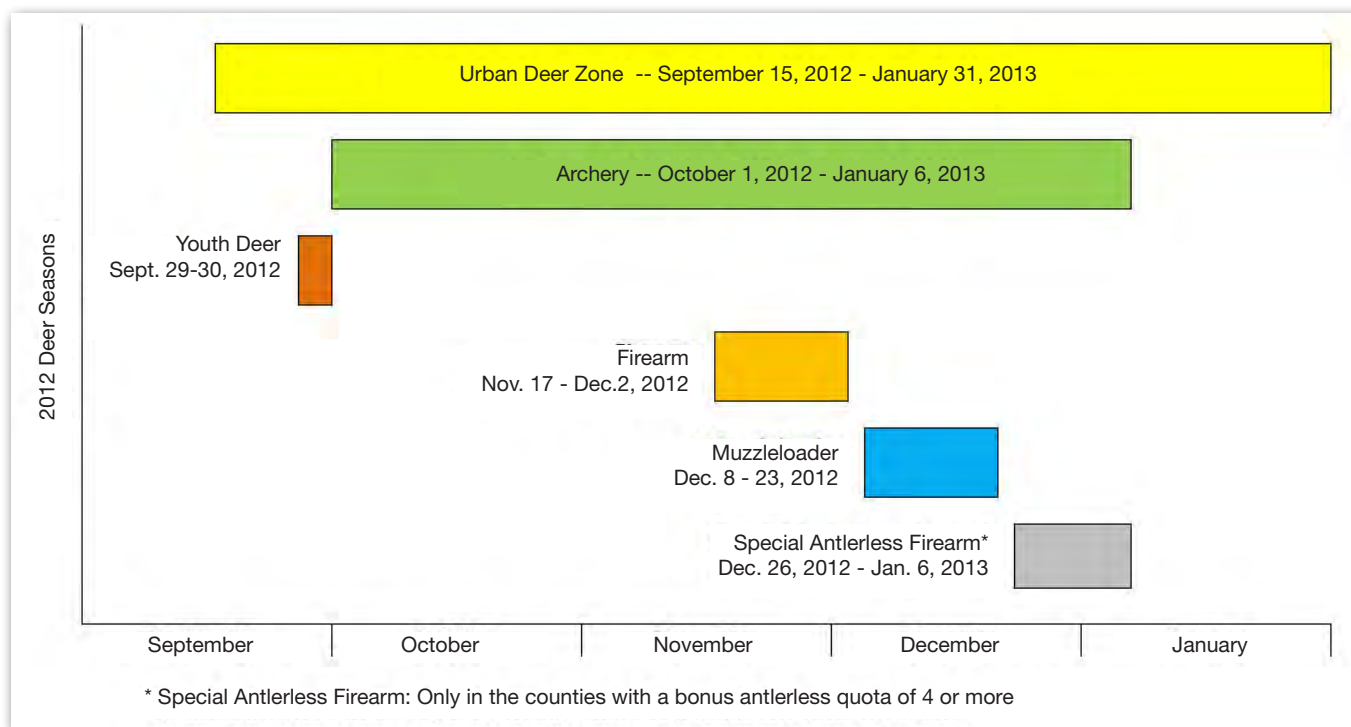


Figure 1. 2012 Deer Seasons

- **Urban deer zones**

Urban deer zones afford hunters with opportunities to harvest deer in defined urban deer zones, in addition to statewide bag limits.

- The urban deer zone season is now continuous and extends from Sept. 15 through Jan. 31 (Figure 1).
- A new urban deer zone license is available to purchase and allows an individual to harvest one deer per license in a defined urban deer zone. This urban deer license **replaces** previous requirements to possess an extra archery license, bonus antlerless, or regular archery license while attempting to satisfy urban deer zone bag limits. Hunters hunting in a designated Urban Deer Zone who are attempting to satisfy the urban deer zone bag limits, must have an urban deer zone license, resident youth hunt/trap, lifetime comprehensive hunting, or lifetime comprehensive hunting and fishing license, or meet a license exemption.
- Individuals hunting in a designated urban deer zone who are attempting to satisfy the urban deer zone bag limit, must harvest an antlerless deer before harvesting an antlered deer (a.k.a. earn-a-buck). The earn-a-buck requirement only applies to the urban deer zone bag limit. The bag limit for the urban deer zone is in addition to statewide bag limits for deer. The urban deer zone bag limit has

not changed and is still 4 antlerless deer, or 3 antlerless deer and 1 antlered deer.

- The urban deer zone in Lake and Porter counties has been extended to the entire county for each.

- **Deer license bundle**

- The deer license bundle is an option some hunters may find beneficial. This license type includes privileges to harvest 2 antlerless deer and 1 antlered deer. The resident deer license bundle is \$65, the nonresident deer license bundle is \$295, and the nonresident youth deer license bundle is \$65.
- The deer license bundle can be used during the following seasons: special youth deer, archery, firearm, muzzleloader, and special antlerless only. The deer license bundle cannot be used for hunting deer in an urban deer zone to satisfy urban deer zone bag limits.

- **Hunting Equipment**

- The maximum rifle cartridge length that can be used in the firearm season has been extended to 1.8 inches. This means that the .460 Smith & Wesson, .450 Bushmaster, and .50 Beowulf will be legal to use during the deer firearms season.
- Crossbows can now be used during the entire archery season, beginning Oct. 1 and continuing through the first Sunday in January. Crossbows can also be used during the urban deer zone season beginning Sept. 15 and continuing through Jan. 31.
- A crossbow means a device for propelling an arrow by means of traverse limbs mounted on a stock and a string and having a working safety that may be drawn, held, and released by a mechanical device. It has to have a mechanical safety and at least 125 lbs pull.
- A deer crossbow license will be required to hunt with a crossbow during the archery season, unless that individual has a valid resident youth hunt/trap, lifetime comprehensive hunting, or a lifetime comprehensive hunting and fishing license, or is exempt from needing a license.
- A deer crossbow license is good for either one antlerless deer or one antlered deer. The bag limit for the archery season is 2 antlerless deer, or 1 antlered deer and 1 antlerless deer. Hunters are allowed to harvest only one deer per crossbow license.

- **Hunter Orange Requirements**

- A ground blind must have at least 144 square inches of hunter orange material that is visible from any direction while deer hunting during any season in which a hunter is already required to wear hunter orange.
- Youth hunters must wear hunter orange during the youth special deer season and all deer hunters must wear hunter orange during the new special antlerless only season; hunter orange is already required for all deer hunters during the firearms and muzzleloader seasons.

- **Military Reserves and National Wildlife Refuges**

- Military Reserves and National Wildlife Refuges can now schedule firearm deer hunts starting Oct. 1 and continuing until Dec. 31.
- Instead of having military/refuge deer licenses that were equipment specific (e.g., military/refuge deer firearm), there is now just one “military/refuge deer license,” which can be used with the equipment type that is allowed during a specific military/refuge deer hunt. A deer harvested with a military/refuge license does not count towards an individual’s statewide deer bag limit.
 - An individual may use an archery, firearms, or muzzleloader deer license on a military/refuge area, but must follow season dates and bag limits that apply to those licenses. For example, if a hunter uses a deer firearm license on a military/refuge area, the individual could only use the license to take an antlered deer during a military/refuge hunt that coincided with the regular deer firearm season. If a person chooses to use their deer firearm license on a military/refuge hunt, the harvested deer would count towards the hunter’s statewide deer bag limit.
- The military/refuge deer license privilege is included in the following license types: resident youth hunt/trap, lifetime comprehensive hunting, lifetime comprehensive hunting and fishing license.

- **Youth Deer Season**

Youth season hunters may now take the number of antlerless deer during this special season that is allowed by the bonus county quota. Youth hunters may still take an antlered deer during this season in addition to one or more antlerless deer, but an antlered deer harvested during the youth season counts towards their statewide bag limit of one antlered deer.

Iowa Status Report Summary – 2011

Licenses Issued: Total: 392,930 Res: 368,932 Nonres: 14,688 Youth: 9,310

Reported Harvest: Total: 121,407 Antlered Buck: 46,212 Antlerless: 75,195
“Antlered Buck” includes shed-antlered bucks also

Age of Bucks: UNK

% Antlerless in Total Harvest: 62%

Hunter Numbers: Res: 167,333 Nonres: 8,581 Youth Season: 8,865 (figure included in the resident statistic)

Minimum Age: None. Twelve years old with Hunter Safety to hunt without direct supervision

Fees: Res: \$28.50 Nonres: \$426.00

Season Dates: Archery: 10/1- 12/2 & 12/19 – 1/10
Muzzleloader: 10/15 – 10/23 & 12/19 – 1/10
Shotgun: 12/3 – 12/7 & 12/10 – 12/18
Youth/Disabled: 9/17 – 10/2
Nov. Antlerless: 11/25 – 11/27
Jan. Antlerless: 1/11 – 1/29
Nonres. Hol. Antlerless: 12/24 – 1/02

Disease Issues 2011/2012: No evidence of CWD was found in any of the 4,526 tissue samples from wild deer.

However, one positive case was identified in the 375 captive deer and elk tissue samples submitted from shooting preserves. The positive animal was a whitetail buck from a Davis County preserve. Investigation revealed that the animal had been brought to the facility shortly before its harvest from a breeding facility in Cerro Gordo County. Currently both facilities are under quarantine and a depopulation plan for the shooting preserve is being developed. Since 2003, 42,557 wild deer samples and 1,725 captive deer and elk samples from shooting preserves have been processed.

There were 6 probable cases of EHD reported in 2011. Currently there is an active EHD outbreak in southern Iowa in 2012.

A number of “escaped” captive cervids are currently loose in the state.

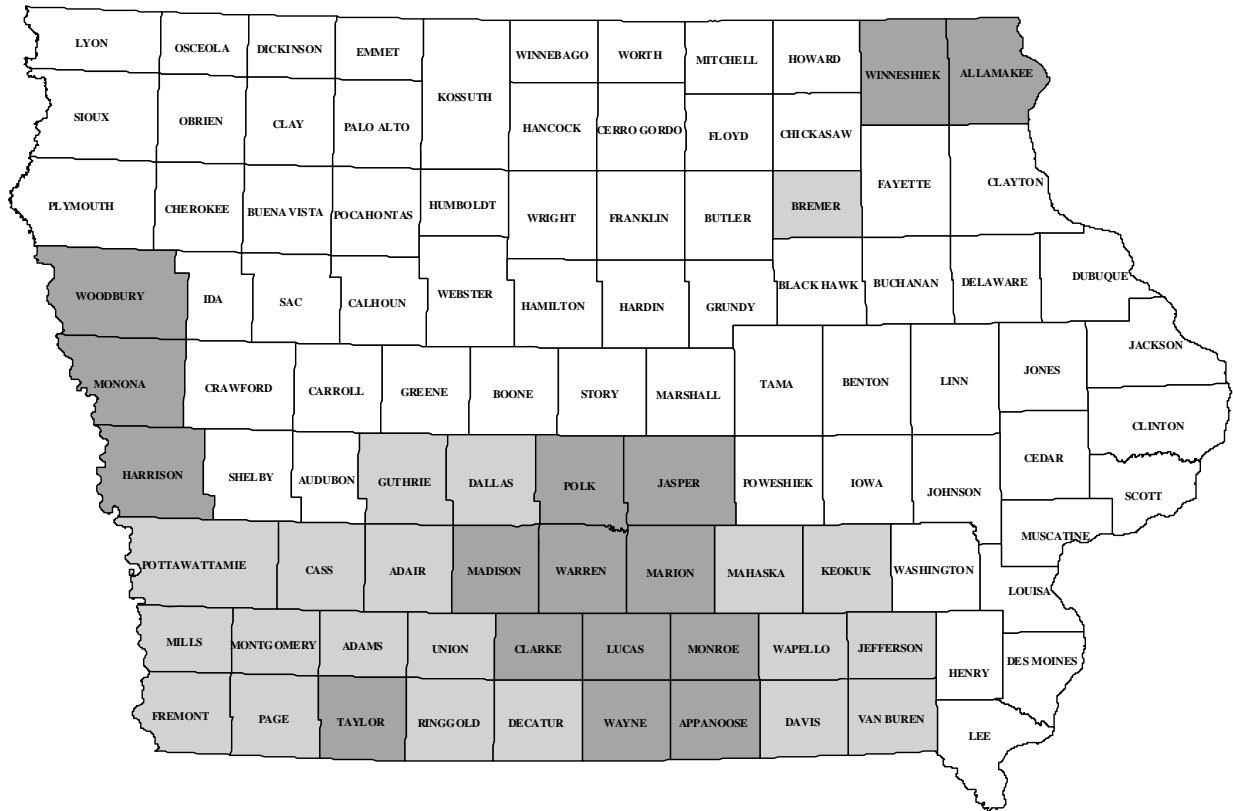
Population Trend:

Statewide: Deer herd declining & very near statewide goal in the 16 WMUs:

63 counties: Populations at or near goals (about 12 actually below goal to varying degrees)

36 counties: Populations declining and moving towards goal

Figure A. Status of Iowa counties in relation to established goals.



- Counties at or below goal in 2012
- Additional counties projected to be at goal by 2013
- Counties not projected to be at goal until after 2013 (the majority in 2014)

Midwest Deer and Turkey Group Report: Iowa 2011/12 Season

Reported Kill for the 2011/2012 Deer Season

There was very little change in license sales in 2011 with 1,368 fewer deer licenses being issued for the 2011/12 deer season compared to 2010. The difference was comprised of 1,777 fewer antlerless licenses and 409 more any-deer licenses. The number of paid licenses decreased by 689 and landowner/tenant licenses decreased by 679.

The total reported harvest for 2011/12 was 4.5% lower than the previous year (5,687 fewer deer). Antlerless deer (not including shed-antlered bucks) represented 62% of the harvest and 52% of the total harvest was comprised of does (Table 1). The proportions represented a 1% increase in does with no change in antlerless animals when compared to the 2010 season.

Table 1. License sales and the number of deer reported killed during the 2011/12 deer season.

Season	Licenses	Reported Kill					Success Rate ^a	% Does
		Antlered Bucks	Button Bucks	Shed Bucks	Does	Total		
Youth/Disabled	9,601	1,752	285	4	1,330	3,371	35%	39%
Early Muzzleloader	12,433	2,101	309	1	2,016	4,427	36%	46%
Archery	88,676	11,536	1,614	48	8,822	22,020	25%	40%
November Antlerless	7,446	7	425	6	1,556	1,994	27%	78%
Shotgun 1 (Paid)	80,051	13,366	3,342	52	14,301	31,061	39%	46%
Shotgun 2 (Paid)	63,944	7,344	2,418	110	11,197	21,069	33%	53%
Shotgun 1&2 (LO/T)	41,973	3,610	1,269	48	6,082	11,009	26%	55%
Late Muzzleloader	38,192	2,705	794	142	4,524	8,165	21%	55%
January Antlerless	25,906	13	1,038	465	6,304	7,820	30%	81%
Nonresident	14,610	2,761	308	10	2,400	5,479	38%	44%
Depred & Spec Hunts	10,098	85	624	46	4,237	4,992	49%	85%
Totals	392,930	45,280	12,426	932	62,769	121,407	31%	52%

^aLicenses reported successfully filled

This hunting season represented the sixth year of mandatory harvest reporting in Iowa. Since 2006, the reported harvest figures have represented the known minimum harvest for each season. Information (registration numbers, age and sex, county of kill, etc.) was collected from about 2,200 deer checked in the field and at lockers during chronic wasting disease (CWD) surveillance and hunter contacts to determine what proportion of successful hunters reported their deer. Examination of this data indicated that 88.8% of the harvested deer that were encountered in the field were reported. This was an increase of 2.2% from the reporting rate observed during the 2010 seasons.

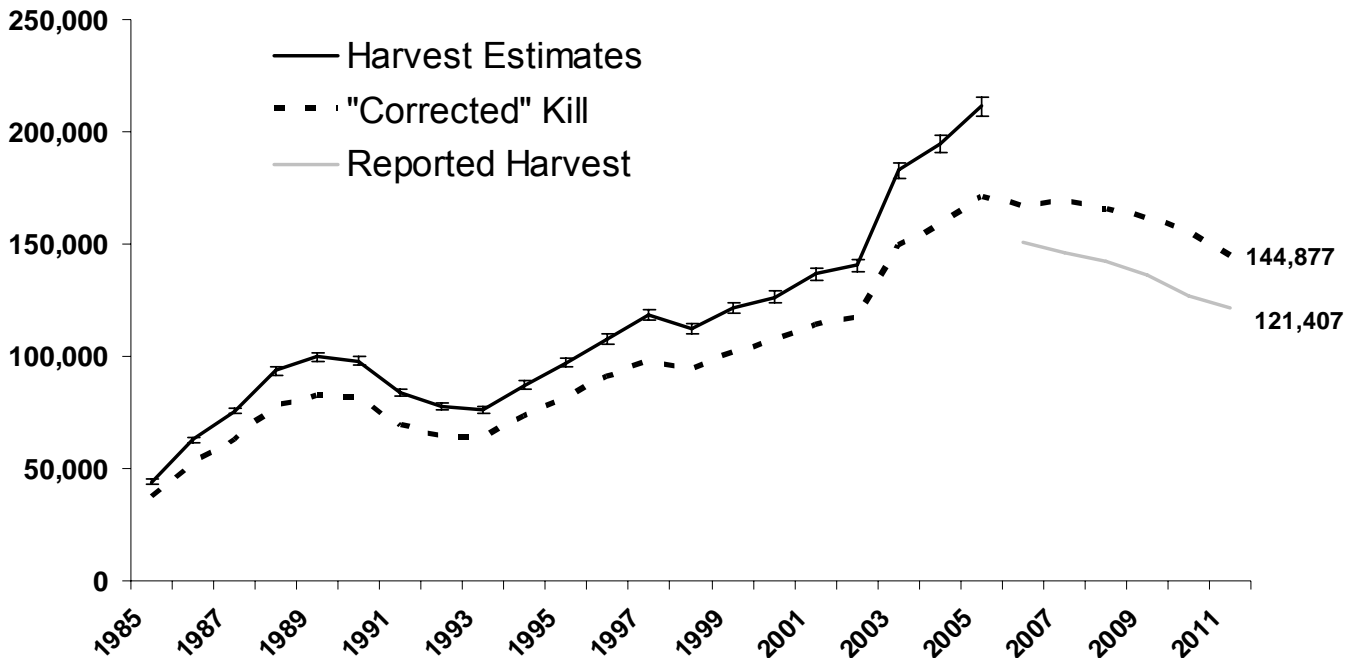
There is likely a bias in the above rate since all of these situations require the hunter to take the deer to a locker or have contact with a DNR official or someone in an official capacity. People in these situations may be more likely to report their deer than would someone who hadn't talked with a DNR official or someone who doesn't take their deer to a locker. Recent deer hunter surveys indicate that about 1/3 of Iowa's deer hunters completely process their deer themselves. However, gathering data from these individuals is problematic since there is no way to obtain the data without someone from, or working with, the DNR contacting them.

In final analyses, making some allowance for the potential bias, it was estimated that about

83.8% of the deer harvested in 2011/12 were properly reported. This represents an estimated total harvest of approximately 144,875 deer which is 7.0% lower than in 2010.

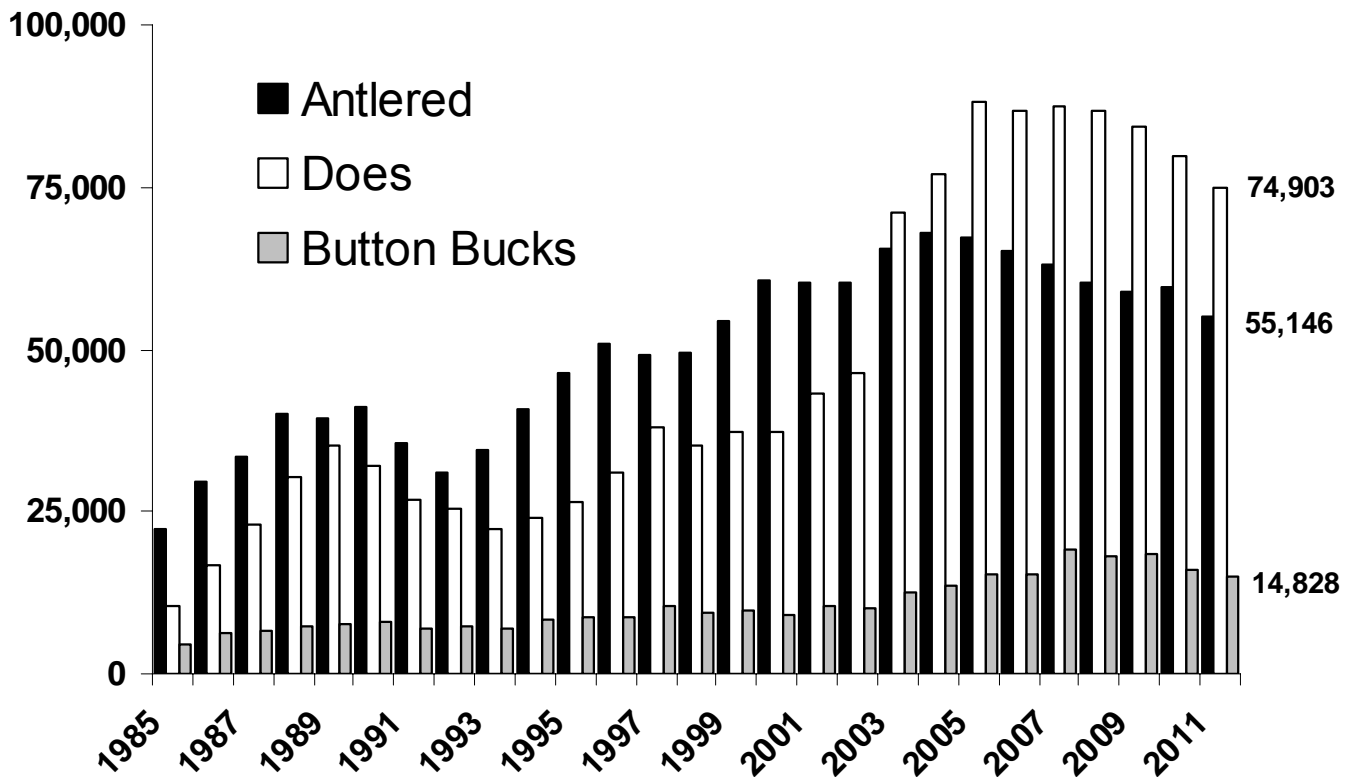
Figure 1 compares the harvest reporting system (a known minimum harvest level) with the post-season postcard survey harvest estimates conducted prior to the 2006 hunting season. The figure displays what past harvests might have looked like using the calculated relationship between the two systems (the “actual” harvest levels).

Figure 1. A comparison of the post-season harvest estimates from 1985-2005 (the top line) with the reported harvests from 2006-11 (the bottom line). The dotted line would be the “actual” harvest based on annual reporting compliance estimates (2006-11) and on the estimated biases in the postseason postcard survey for the years prior to 2006.



Utilizing the reporting information, an estimate of the number of antlered bucks, does, and button bucks killed in 2011 can be made. In Figure 2, estimates from 1985-2005 have been constructed on the assumption that the relationship between the reported harvest and the post-season mail survey were consistent through time and that 90% of the harvest was reported (2006 compliance data). Harvest estimates from 2006-2011 were calculated from annual harvest reporting rates as described previously. The 2011 estimate is based on an estimated 83.8% reporting rate as discussed earlier.

Figure 2. An estimate of the number of antlered bucks, does, and button bucks killed in 2011 if 83.8% of the actual harvest were reported. The estimates from 1985 -2005 account for estimated biases in the postcard survey and assume the relationship between the reported harvest and the post-season mail survey would have been consistent in the past (constructed using the 2006 compliance rate of 90%).



Population Trend Surveys

Four techniques are currently used to monitor deer population trends in Iowa. These are 1) aerial surveys conducted in January–March after the deer seasons are complete, 2) spotlight surveys conducted in April, 3) a record of the number of deer killed on Iowa's rural highways throughout the year coupled with annual highway use estimates, and 4) the bowhunter observation survey conducted during October–November. All of these surveys correlate well with the corrected harvest estimates and appear to provide reliable long-term trend indices. However, none of these surveys can be considered absolutely reliable predictors of annual changes in the population because of the high variability in the survey conditions, deer behavior, and habitat conditions.

Initiated in 1983, the aerial surveys are currently comprised of about 340 transects/areas distributed throughout the state and are flown primarily from fixed-wing aircraft. Iowa experienced a very mild winter during 2011/12 which resulted in very few aerial trend surveys being completed. Only 15% (52) of the surveys were completed with many of those being flown under marginal survey conditions. This was the lowest number of surveys completed in the last 20 years. Due to the number and quality of the completed surveys, no statewide assessment was attempted with the data.

At the statewide level, the mean for the surveys since 2006 is 18,572 deer observed (± 3032 deer;

±95% CL). This survey is dependent upon snowfall and proper winter weather conditions which make some years more difficult than others to get the surveys completed (as demonstrated by this past winter). While displaying more annual variation overall than any of the other trend surveys, it does provide good correlation values in about one-third of the Units. However, on an overall basis, its correlation values are the lowest of the trend survey methods in Iowa despite its long history of use. The merit of continuing to conduct this trend survey is being evaluated.

Road-killed deer information has been collected in Iowa since 1951. The information is collected by the Department of Transportation personnel and law enforcement officers throughout Iowa on rural interstates and state highways. The number of deer killed on rural highways increased by about 5% in 2011. The estimated number of vehicle miles driven also increased in 2011 when compared to 2010 so the adjusted road kill (kills per billion miles – KBM) increased by 4% overall. The trend in road kills (KBM) has been a declining one as the deer population decreases, but the relationship between these two variables has never been directly linear. The KBM rates over the last 4 years compare well to estimates from the early 1990s.

At the statewide level, the mean number of road-killed deer since 2006 is 12,308 (±2,095 deer; ±95% CL). When annual highway mileages are taken into account to make the survey data more comparable between years (the KBM transformation), the mean is 657 KBM (±103 KBM; ±95% CL). Both indices display about the same variation with this shorter data string (2006 vs. 2000) as does the aerial trend survey but provide some of the better correlations with the model simulations. This survey requires a year-round effort in order to function properly and could possibly be affected by work priorities and budgets.

The old spotlight routes were discontinued in 2012 with the trend survey being continued utilizing the new spotlight routes that were established in 2006. The old spotlight routes were initiated in 1978 and were comprised of 90, 25-mile routes distributed throughout the state (approximately 2,250 total miles of transects). Originally set up to monitor raccoon population trends, these routes were primarily concentrated in river bottom and timbered areas. Since the transects were located in prime deer habitat areas, observations of these animals were recorded as well. The results of the old routes from 2006-2011 were included in this year's analyses to help provide more continuity in the transition of data strings and model structure between this year's and last year's analyses (to be described later in this report).

The statewide average in the number of deer observed per route since 2006-2011 is 116 (±18 deer; ±95% CL). The variation displayed by this survey was the third highest of the trend surveys but overall it has provided good correlations with the model simulations.

Initiated in 2006, the new spotlight routes were set up to be more representative of the rural habitats available to deer in Iowa. Consisting of 199 transects distributed in every county (2 per county except for one county which has 3 transects) the total survey mileage is approximately 4,750 miles. This is more than double the total transect length of the old spotlight surveys. Location, distance, and bearing are recorded for each deer/deer group observed allowing for density estimates to be calculated. This aspect of the trend survey is currently being evaluated. The number of deer observed per 25 miles in 2012 decreased by 13% on the new routes.

At the statewide level, the mean number of deer observed per 25 miles since 2006 is 60 (±6 deer; ±95% CL). The new spotlight surveys display less variability overall when compared to the old spotlight routes and in the vast majority of cases, the same general trends. Overall, the correlations are not quite as strong with the model simulations as the old spotlight survey routes. This is felt to simply be a function of the inherent variability of the trend surveys. However, at the statewide level, the model correlation is stronger with the new spotlight routes.

The bowhunter observation survey, which began in the fall of 2004, is a stratified random sample

of avid bowhunters (hunters who have purchased archery licenses for at least 3 consecutive years) based on Iowa's 9 climatic regions. In 2011, this survey represented over 100,000 hours of observation distributed throughout the state and was conducted voluntarily by Iowa archers (in 2011 approximately 2,050 individuals returned observation logs). The tactics used during this season (stand hunting) make it useful for gathering observational data. Bowhunters are responsible for recording the date and time of their hunts and also observations of antlered, antlerless (since 2005), and unknown deer along with other selected animals. In 2011, observation rates of antlered and antlerless deer declined by 3% and observed total deer rates declined by 4%.

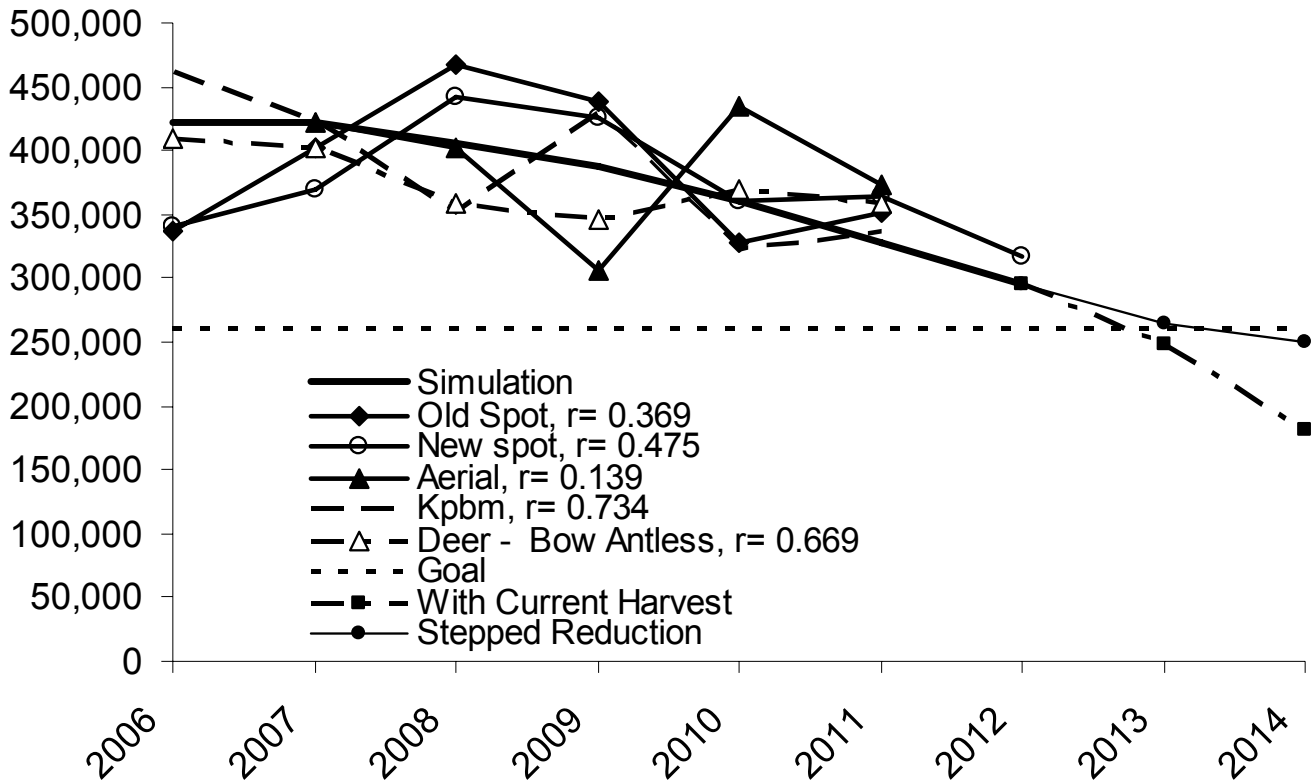
All of the bowhunter observation survey indices provide good correlations with the model simulations and display the lowest levels of variation of all the surveys. The antlerless observations provide the best correlations overall, followed by the total deer observations. Statewide since 2006, the mean number of antlerless deer observed per 1000 hours is 1,041 (± 76 deer; $\pm 95\%$ CL), 1,592 total deer (± 107 deer; $\pm 95\%$ CL), and 440 antlered deer (± 27 deer; $\pm 95\%$ CL). The good levels of correlation, low levels of variation, and the involvement of the public are all encouraging signs for this relatively young trend survey.

The value of the variety of population trend surveys utilized is that no single survey method is expected to provide all the information needed to determine current trends in Iowa's deer herd. The use of the model simulations allow all of the trend survey data, harvest data, and herd parameters to be brought together and analyzed as a single unit while projecting population simulations that "best fit" all the available information.

Utilizing the mathematical relationships described earlier to plot estimated harvests and harvest structures from 2006-2012, the data was utilized in the population model and the resulting "best fit" simulation indicates a declining deer population statewide (Figure 3). The model suggests that about a 10% decline in the population occurred as a result of the 2011/12 harvests in conjunction with other mortality factors. The model has its best correlations with components of the road kill survey, the bowhunter survey, and the spotlight surveys.

In 2008, the legislature created the Deer Study Advisory Committee to review the deer management program and make recommendations of future needs for balancing Iowa's deer resource among the variety of public opinions and desires. The committee included legislators from the House and the Senate representing both parties and citizens representing a variety of non-hunting and hunting interest groups. The committee agreed that the trend surveys and model analyses provided an adequate tool for establishing and managing population trends of Iowa's deer herds. The group also agreed that the DNR goal of returning deer numbers to the mid-to-late 1990s population levels represented a good compromise among the competing desires of the public. In 2009, the committee's report was accepted by both the House and the Senate Natural Resource Committees.

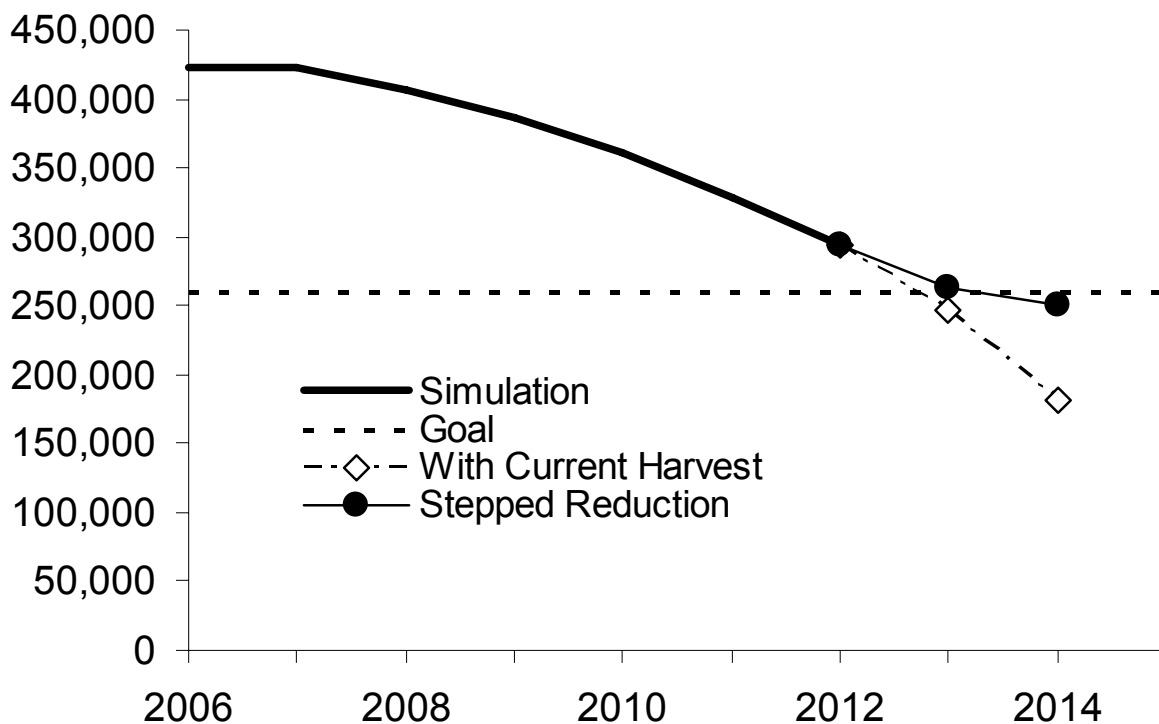
Figure 3. A comparison of the results from the statewide population simulation with deer population trend surveys. This simulation uses the 2011 harvest from the reporting system and a reporting rate of 83.8%.



Antlerless Quotas for the 2012/2013 Deer Season

The simulation can be used to estimate the level of harvest needed in 2012 to reach the department's goal for the deer population. The goal is a deer population that approximates levels that occurred in the mid-to-late 1990s when the public's acceptance of deer numbers was more evenly balanced. On a statewide basis, an overall 10% reduction in the doe harvest was needed in 2012 in order for the simulation not to fall below the Department's goal (Figure 4).

Figure 4. The result of the statewide population simulation with current and recommended doe harvests.



For the 2012 model analyses, the county model structures were reorganized to reflect the current administration of Wildlife Management Units (WMU) in Iowa. This resulted in the number of Unit models dropping from 20 to 16. The data strings were also adjusted to begin in 2006 which allowed for the analyses of trend data which had all been collected utilizing consistent procedures and time periods (e.g., harvest trend estimates).

Simulations were conducted for each WMU to determine the county antlerless quotas (Table 2). The “best fit” models indicated that the doe harvest needed to decrease in 4 WMUs in order to keep them from dropping below the Department's goals. Recommendations were made to reduce antlerless quotas in 20 counties contained within these WMUs to maintain goal objectives. The antlerless quota changes were adopted at a level of approximately 40% of those recommended. However, hunters will still need to be judicious in their use of antlerless licenses in these counties as well as others or deer numbers may go below the department's goal. Deer numbers are still above the

department's goal in some areas in central and southwestern Iowa. The 2012 antlerless quotas will help reduce deer numbers in these areas to the department's goals.

Table 2. Deer harvest, correlation of the simulation with the deer population trend surveys, and the change in the doe kill needed to move the simulated deer numbers towards the department's goal for all 16 wildlife units.

Wildlife Unit	2011 Harvest		Correlation of Simulation with Trend Surveys						Change in Doe Kill
	Does	Bucks	Old	New	Bowhunter				
			Spotlight	Spotlight	Aerial	Road Kill	KBM	(antlerless obs.)	
Black Hawk	764	1,067	-0.359	0.428	-0.798	0.515	0.512	0.475	0%
Cedar-Wapsi	2,957	3,379	-0.326	-0.539	-0.524	0.474	0.422	0.245	+3% ^a
Clear Lake	944	1,314	0.726	-0.432	-0.820	0.801	0.698	0.422	0%
Grand River	8,309	6,999	0.414	0.320	-0.668	0.703	0.794	0.539	0%
Great Lakes	632	846	0.719	0.797	-0.111	0.832	0.840	0.639	0%
Iowa River	5,609	5,175	0.357	-0.562	-0.310	0.617	0.587	0.802	-34% ^b
Maquoketa	6,919	6,394	-0.001	0.621	0.169	0.848	0.852	0.757	-37% ^b
Missouri River	3,634	3,685	0.072	0.798	0.734	-0.359	-0.501	0.489	0%
Nishnabotna	4,543	4,173	0.824	0.220	-0.680	0.378	0.383	0.334	0%
Odessa	5,581	4,903	0.483	0.033	0.584	0.806	0.838	0.785	-32% ^b
Prairie Lakes	763	1,067	-0.027	-0.873	0.714	0.838	0.810	0.070	0%
Rathbun	6,618	5,967	0.382	0.168	-0.238	0.324	0.377	0.504	0%
Red Rock	6,237	5,519	0.190	-0.171	-0.584	0.264	0.287	0.444	0%
Saylorville	3,850	3,860	0.002	0.537	-0.465	0.407	0.421	0.702	0%
Sugema	8,512	7,226	0.616	0.683	0.826	0.253	0.322	0.866	0%
Upper Iowa	9,032	8,400	0.745	0.618	0.570	0.879	0.854	0.581	-18% ^b

^aWMU had one county that was recommended for an antlerless quota increase as trend surveys indicated this county still needed further herd reduction to return to the mid-to-late 1990s level; adopted as proposed.

^bWMU recommended for antlerless quota reduction; adopted at about 40% of proposed levels overall.

In addition to the antlerless quota reductions, the complete elimination of the November Antlerless season was adopted so this season will not be held in 2012. Four northeastern counties were removed from the January Antlerless season and in the remaining open counties the season was shortened by one week.

As deer numbers continue to decline, hunters will need to become more cautious in the number of does they harvest. Hunters can drive deer numbers lower than desired in local areas even in those counties where deer numbers remain above the goal. Conversely, there are areas in some counties that are at goal where deer numbers are still overabundant. Hunters need to work with landowners to find a desirable level of harvest.

The following map (Figure 5) shows the county antlerless quotas for the 2012/13 deer season. The 38 shaded counties (light and dark shaded) will be open during the January Antlerless season (if licenses are still available on 15 Dec.). In the 21 dark-shaded counties, centerfire rifles will be a legal weapon during the entire season. The total number of antlerless licenses available for 2012/13 is 119,900; this is 13,000 less than last year.

Figure 5. 2012/13 resident antlerless-only license quotas by county and distribution of January antlerless-only season.

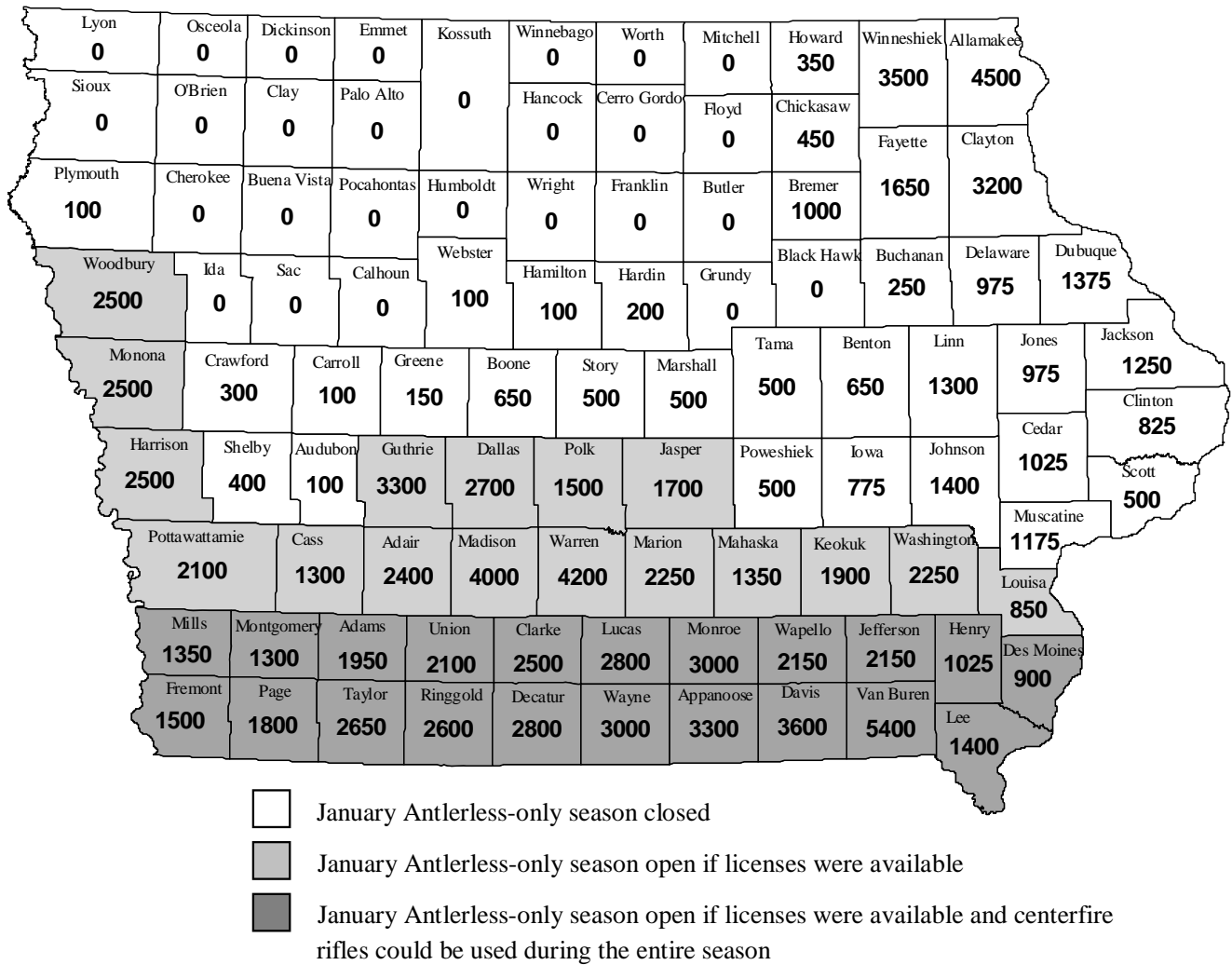


Table 1.1 A summary of the number of licenses issued, the number of deer harvested, and success rates for the 2011-2012 season.

Season	License Type	Licenses Issued	Number of Hunters ^c	Harvest ^d	Success Rate ^e	
REGULAR GUN						
Season 1	Paid	Either-sex Antlerless	58,237 21,814	58,237 13,725	21,348 9,713	37% 45%
Season 2		Either-sex Antlerless	43,892 20,052	43,892 11,953	12,998 8,071	30% 40%
	Nonresident	Both	8,121	5,196	3,467	43%
		Total	152,116 (-1%)^a	133,003	55,597 (-7%)	37%
Season 1 & 2	Landowner	Either-sex Antlerless	24,438 17,535	24,438 14,860	5,734 5,275	23% 30%
		Total	41,973 (+1%)	39,298	11,009 (-4%)	26%
GUN SEASON TOTAL		194,089 (NC)	172,301	66,606 (-7%)	34%	
MUZZLELOADER						
Early	Paid	Either-sex Antlerless	7,499 1,745	7,499 1,264	2,752 851	37% 49%
	Landowner	Both	3,189	2,746	824	26%
		Total	12,433 (NC)	11,509	4,427 (+10%)	36%
Late	Paid	Either-sex Antlerless	19,619 13,210	19,619 9,144	4,005 3,288	20% 25%
	Landowner	Both	5,363	4,679	872	16%
	Nonresident	Both	1,888	944	580	31%
		Total	40,080 (+4%)	34,386	8,745 (-8%)	22%
MUZZLELOADER TOTAL		52,513 (+3%)	45,895	13,172 (-2%)	25%	
NOVEMBER ANTLERLESS SEASON						
	Paid	Antlerless	6,280	5,124	1,733	28%
	Landowner	Antlerless	1,166	1,095	261	22%
		Total	7,446 (-18%)	6,219	1,994 (-29%)	27%
JANUARY ANTLERLESS SEASON						
	Paid	Antlerless	18,889	11,475	6,659	35%
	Landowner	Antlerless	6,940	6,416	1,122	16%
		Total	25,829 (-3%)	17,891	7,781 (-8%)	30%
YOUTH						
	Paid	Both	9,134	8,718	3,222	35%
	Landowner	Both	176	160	51	29%
	Disabled	Both	280	235	95	34%
		Total	9,590 (+3%)	9,113	3,368 (+6%)	35%
ARCHERY						
	Paid	Either-sex Antlerless	52,561 27,151	52,561 17,676	11,706 7,917	22% 29%
	Landowner	Both	8,814	6,683	2,360	27%
	Nonresident	Both	4,202	2,101	1,312	31%
		Total	92,728 (+1%)	79,021	23,295 (+4%)	25%
TOTAL ^b		392,930 (NC)	335,450	121,407 (-4%)		

^a - the numbers in parentheses are the percent change from 2010-2011, NC = < 0.5%

^b - total include licenses and kill from hunts in special deer management zones and depredation licenses

^c - number of individuals with licenses, not comparable to estimates prior to 2006 hunting season

^d - reported kill, not comparable to estimates prior to the 2006 hunting season

^e - licenses reported successfully filled, not comparable to estimates prior to 2006 hunting season

MIDWEST DEER STUDY GROUP
Blue Bell Lodge, Custer State Park, South Dakota
KANSAS - 2011-2012 STATUS REPORT
Prepared by Lloyd Fox

Deer Population Trends

The Kansas Department of Wildlife Parks and Tourism (KDWPT) manages deer at the level of Deer Management Units (DMU), see Figure 1. Population trends, harvest and human dimensions aspects to deer management are summarized by these units.

Population trend information from deer related vehicle accident data are collected on a county-by-county basis and converted to an approximate DMU based on the mean of all counties within a DMU. Population trends of deer in Kansas are currently monitored using deer related vehicle accidents adjusted for annual changes in vehicle mileage. County sheriff or state highway patrol officers collect vehicle accident data at the site of each accident. State laws require that an accident report be prepared for each accident that results in an injury or causes more than \$1,000. Vehicle mileage estimates for each county are obtained from standard surveys compiled by the Kansas Department of Transportation (KDOT).

There were 9,153 accidents reported during 2011 compared to 9,018 in 2010, a increase of 1.5%.

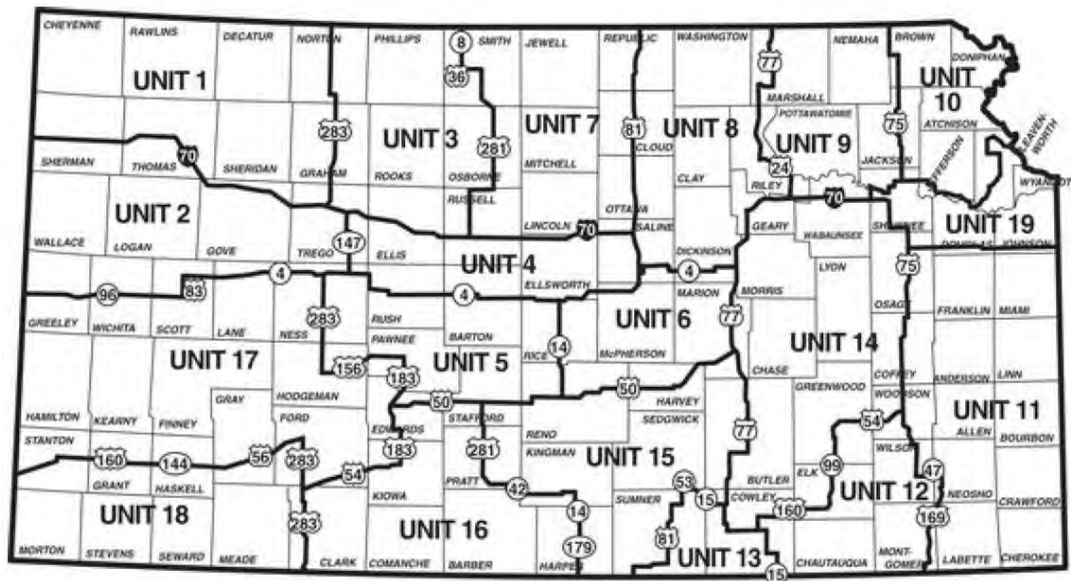


Figure 1. Deer management units in Kansas.

Bowhunter observations of deer have been collected using diaries and summary forms since 1998 (Figure 2).

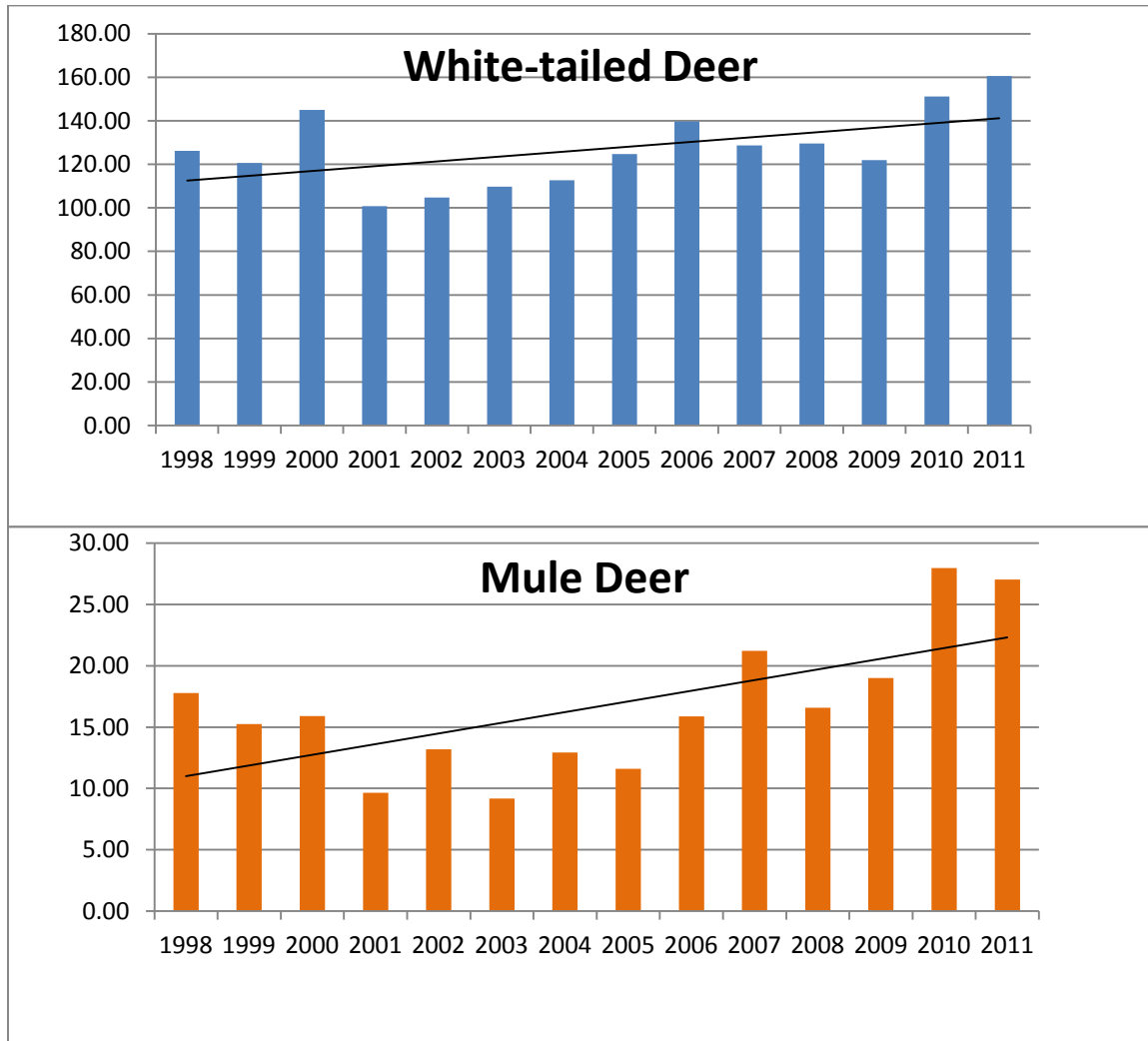


Figure 2. The average number of white-tailed deer and mule deer seen per 100 observational hours recorded in diaries by Kansas bowhunters during the seasons from 1998 to 2011.

Spotlight surveys have been conducted by agency personnel during October and November on selected department managed properties and on representative areas of private property in deer management units since 2002. Distance sampling techniques have been used to analyze those data. Surveys were conducted along 1,997.9 miles of survey routes during 2011. Classifications of 7,200 deer to age, sex and species was attempted from the 3,419 clusters of deer observed. A total of 5,908 white-tailed deer and 233 mule deer were classified in those groups. Age and sex ratios in the observation was 32.1 bucks per 100 does and 56.9 fawns per 100 does. Standard distance and angle data were collected as well as observations on the behavior of the deer and the habitat they were using. The estimated deer per square miles with a 95% confidence interval for the surveyed areas in 2011 are shown in Table 1.

Table 1. Estimated deer densities as determined by spotlight and distance sampling procedures in Deer Management Units and selected Wildlife Management Area of Kansas during October and November of 2011.

DMU	Land Type or Name	Estimated Density	95% Confidence Interval	
			Lower	Upper
1	Private	3.26	1.65	6.43
1	Private (CWD area)	16.70	10.09	27.65
1	Public (NORR)	37.49	14.61	96.20
2	Private	16.70	10.09	27.65
2	Private LTNC	6.73	4.90	9.23
2	Public CDBR	43.22	23.73	78.73
3	Private	13.21	9.23	18.90
3	Public WEBR	26.66	19.37	36.71
4	Private	9.63	5.34	17.35
4	Public KANR	50.14	9.65	260.50
5	Private	15.56	10.47	23.13
5	Public CHBW	8.18	4.03	16.59
5	Public QNWR	30.17	17.74	51.31
6	Private	5.28	2.62	10.63
6	Public MARR	11.55	6.08	21.94
7	Private	11.47	8.93	14.73
7	Public WILR	26.86	20.09	35.89
7	Public GELR	28.12	19.79	39.97
8	Private	6.49	4.23	9.94
8	Private KONZA	17.52	10.38	29.58
8	Public MILR	19.96	10.88	36.63
8	Public FTRL	10.14	6.14	16.76
9	Private	4.71	2.64	8.41
9	Public TCRR	15.84	11.52	21.77
9	Public JFWA	17.75	13.34	23.64
10	Private	5.54	3.64	8.43
10	Public PERR	8.86	2.62	29.98
10	Private KU	16.02	8.01	32.05
11N	Private	11.11	8.21	15.02
11N	Public HILR	17.89	12.91	24.77
11S	Private	15.46	6.16	38.82
11S	Public MLWA	22.07	12.52	38.90
11	Public GOWA	41.43	33.18	51.73

Table 1. cont.

DMU	Land Type or Name	Estimated Density	95% Confidence Interval	
			Lower	Upper
12	Private	18.18	13.77	23.99
12	Public EKCR	12.82	6.91	23.79
12	Public FLRR	27.39	21.47	34.94
13	Private	22.35	14.07	35.51
13	Public KAWR	76.86	33.70	175.27
14	Private	8.90	2.84	27.89
14	Public MELR	14.71	9.08	23.81
14	Public FHNR	23.97	15.49	37.08
15	Private	9.49	7.45	12.09
15	Public	No Survey	No Survey	No Survey
16	Private	11.68	1.85	73.86
16	Public PRSH	15.07	10.77	21.07
17	Private CREP	7.10	3.97	12.71
17	Public SSWA	No Survey	No Survey	No Survey
18	Private	2.39	1.09	5.24
18	Public CMNG	0.87	0.36	2.10
19	Private	No Survey	No Survey	No Survey
19	Public CLTN	9.70	4.80	19.60
19	Public SMCP	50.19	36.18	69.63
19	Public JOCP	No Survey	No Survey	No Survey

Deer Hunters and Harvest

There were 118,093 people that purchased a deer permit in Kansas during the 2011-12 seasons, an increase of 1.4% over the number of deer hunters in 2010. They purchased 185,940 permits in 2011-12, an increase of 3.90% over the level in 2010 (see Table 2). The history of season dates is presented in Table 3. Shooting hours have traditionally been from ½ hour before sunrise to ½ hour after sunset.

Resident deer hunters may obtain a permit that allows them to pursue either sex of white-tailed deer in any DMU and to use their permit during any season with the equipment authorized for that season (i.e., a statewide any season permit). Resident deer hunters who choose to hunt mule deer in addition to white-tailed deer must purchase an either species, either sex permit instead of the any season permit. Either-species permits are restricted to a DMU and a specific equipment type (archery, muzzleloader or firearms). The archery and muzzleloader permits are unlimited and available over-the-counter. The firearms permits are limited and available by application and drawing.

Quotas for non-resident permits are established for each DMU. Non-residents must apply for a permit. They are selected based on preference points within a random draw system. Hunters receive a preference point each year they but not receive a permit. The total number of non-resident deer permits is established based on deer population trends, deer related vehicle accidents, crop damage complaints and social factors such as landowner desires for additional or fewer non-resident hunters. The number of non-residents is limited in each unit however, the non-residents drawn for a unit may pick the equipment type they desire (i.e., firearms, muzzleloader or archery). They may also designate one additional adjacent unit where they may hunt. During the 2011-12 drawing 17,504 non-residents applied for a deer permit and 16,713 received a permit. A total of 983 people did not receive their first choice and 192 of them were draw for one of their alternative choices. In only seven units were there more applications than available permits. After the drawing there were 4,309 non-resident deer permits still available. Those permits were issued on a first come basis and most were sold within a few days after the system was reopened.

Successful non-residents with an archery or muzzleloader permit for western units are allowed to draw for a mule deer stamp. This allows them to pursue either species of deer. Table 2 shows the 133 non-resident muzzleloader hunters and 133 non-resident archers obtained a mule deer stamp.

Resident and non-resident landowners are allowed to purchase a deer permit restricted to lands they own or lease for agricultural purposes. Those types of permits allow the hunter to pursue either species and either sex of deer. There is no quota on that type of permit and those permits may be purchased over-the-counter and used during any season with the equipment that is legal during that season.

The trend in hunting pressure and estimated harvest since 1994 is shown in Table 4. That table shows the changes in number of limited quota permits issued through drawings and the number of unlimited availability permits.

TABLE 2.
Number of deer hunting permits sold in Kansas for the 2011-12 seasons.

		Citizen Category				Drawing Time		
State Residency	Permit Type	General Resident	Landowner / Tenant	Youth	Hunt-Your-Own-Land	Non-Res Draw	Non_Res Leftover	Total
Resident	Firearm - ESES	1,738	389	164				2,291
	Muzzleloader - ESES	834	142	69				1,045
	Firearm - ESAO	478		41				519
	Any Season - WTES	51,680	18,853	7,633				78,166
	Statewide Archery - ESES	5,212	1,100	253				6,565
	Any Season - WTAO	57,924		3,698				61,622
	Preference Point	120						120
								0
HOYOL	Any Season Resident - ESES				5,890			5,890
	Any Season Non-Resident - ESES				1,163			1,163
	Special Transferrable - ESES				1,516			1,516
	Any Season Non-Resident Tenant - ESES				609			609
								0
Non- Resident	Firearm - WTES					6,253	1,404	7,657
	Muzzleloader - WTES					1,715	415	2,130
	Muzzleloader - ESES					133		133
	Firearm - ESAO					103		103
	Any Season - WTAO					5,603		5,603
	Archery - WTES					8,479	2,573	11,052
	Archery - ESES					133		133
	Preference Point					1,950		1,950
								0
Special	Commissioner - ESES					6		6
	Youth Hunt of A Lifetime						3	3
Total		117,986	20,484	11,858	9,178	24,375	4,395	185,940
ESES	Either Species Either Sex							
ESAO	Either Species Antlerless Only							
WTES	White-tailed Deer Either Sex							
WTAO	White-tailed Deer Antlerless Only							
HOYOL	Hunt On Your Own Land							

Table 3. History of deer hunting season dates in Kansas.

YEAR	FIREARMS		ARCHERY		MUZZLELOADER		YOUTH AND DISABILITY		EXTENED		YEAR
	OPEN DATES	NO. DAYS	OPEN DATES	NO. DAYS	OPEN DATES	NO. DAYS	OPEN DATES	NO. DAYS	OPEN DATES	NO. DAYS	
1965	Dec. 11 - 15	5	Oct. 1 - Nov. 15	46	0	0	0	0	0	0	1965
1966	Dec. 10 - 14	5	Oct. 1 - Dec. 9	70	0	0	0	0	0	0	1966
1967	Dec. 8 - 12	5	Oct. 1 - Nov. 26	57	0	0	0	0	0	0	1967
1968	Dec. 13 - 17	5	Oct. 1 - Dec. 1	62	0	0	0	0	0	0	1968
1969	Dec. 6 - 10	5	Oct. 1 - Nov. 30	61	0	0	0	0	0	0	1969
1970	Dec. 5 - 9	5 - WEST	Oct. 1 - Nov. 30	61	0	0	0	0	0	0	1970
	Dec. 5 - 13	9 - EAST	Oct. 1 - Nov. 30	61	0	0	0	0	0	0	
1971	Dec. 4 - 8	5 - WEST	Oct. 16 - Nov.25, Dec.11 - Dec. 31	62	0	0	0	0	0	0	1971
	Nov. 27 - Dec- 5	9 - EAST	Oct. 16 - Nov.25, Dec.11 - Dec. 31	62	0	0	0	0	0	0	
1972	Dec. 2 - 6	5 - WEST	Oct. 1 - Nov. 30	61	0	0	0	0	0	0	1972
	Dec. 2 - 10	9 - EAST	Oct. 1 - Nov. 30	61	0	0	0	0	0	0	
1973	Dec. 1 - 9	9	Oct. 1 - Nov. 25, Dec. 15 - Dec. 31	73	0	0	0	0	0	0	1973
1974	Dec. 7 - 15	9	Oct. 1 - Nov. 30, Dec. 21 - Dec. 31	72	0	0	0	0	0	0	1974
1975	Dec. 6 - 14	9	Oct. 1 - Nov. 30, Dec. 20 - Dec. 31	73	0	0	0	0	0	0	1975
1976	Dec. 4 - 12	9	Oct. 1 - Nov. 30, Dec. 18 - Dec. 31	75	0	0	0	0	0	0	1976
1977	Dec. 3 - 11	9	Oct. 1 - Nov. 30, Dec. 17 - Dec. 31	76	0	0	0	0	0	0	1977
1978	Dec. 2 - 10	9	Oct. 1 - Nov. 30, Dec. 16 - Dec. 31	77	0	0	0	0	0	0	1978
1979	Dec. 1 - 9	9	Oct. 1 - Nov. 28, Dec. 12 - Dec. 31	79	0	0	0	0	0	0	1979
1980	Dec. 6 - 14	9	Oct. 1 - Dec.3, Dec. 17 - Dec. 31	79	0	0	0	0	0	0	1980
1981	Dec. 5 - 13	9	Oct. 1 - Dec. 2, Dec. 16 - Dec. 31	79	0	0	0	0	0	0	1981
1982	Dec. 4 - 12	9	Oct. 1 - Dec. 1, Dec. 15 - Dec. 31	79	0	0	0	0	0	0	1982
1983	Dec. 3 - 11	9	Oct. 1 - Nov. 30, Dec. 12 - Dec. 31	79	0	0	0	0	0	0	1983
1984	Dec. 1 - 9	9	Oct. 1 - Nov. 30, Dec. 10 - Dec. 31	79	0	0	0	0	0	0	1984
1985	Dec. 7 - 15	9	Oct. 1 - Dec. 6, Dec. 16 - Dec. 31	79	0	0	0	0	0	0	1985
1986	Dec. 6 - 14	9	Oct. 1 - Dec. 5, Dec. 15 - Dec. 31	79	Dec. 6 - 14	9	0	0	0	0	1986
1987	Dec. 5 - 13	9	Oct. 1 - Dec. 4, Dec. 14 - Dec. 31	79	Dec. 5 - 13	9	0	0	Jan. 2 - 10, 1988	9	1987
1988	Nov. 30 - Dec. 11	12	Oct. 1 - Nov. 29, Dec. 12 - Dec. 31	79	Nov 30 - Dec 11	12	0	0	Jan. 2 - 10, 1989	9	1988
1989	Nov. 29 - Dec. 10	12	Oct. 1 - Nov. 28, Dec. 11 - Dec. 31	79	Sept. 22 - 30	9	0	0	0	0	1989
1990	Nov. 28 - Dec. 9	12	Oct. 1 - Nov. 27, Dec. 10 - Dec. 31	79	Sept. 22 - 30	9	0	0	1st seg Jan. 1 - 14, 2nd seg Jan.22 - Feb 4	28	1990
1991	Dec. 4 - 15	12	Oct. 1 - Dec. 3, Dec. 16 - Dec. 31	79	Sept. 21 - 29	9	0	0	1st seg Jan. 1 - 13, 2nd seg Jan.21 - Feb 3	28	1991
1992	Dec. 2 - 13	12	Oct. 1 - Dec. 1, Dec. 14 - Dec. 31	79	Sept. 19 - 27	9	0	0	Jan. 13 - 26	14	1992
1993	Dec. 1 - 12	12	Oct. 1 - Nov. 30, Dec. 13 - Dec. 31	79	Sept. 18 - 26	9	0	0	Jan.11 - 24	14	1993
1994	Nov. 30 - Dec. 11	12	Oct. 1 - Nov. 29, Dec. 12 - Dec. 31	79	Sept. 17 - 25	9	0	0	0	0	1994
1995	Dec. 1 - 10	12	Oct. 1 - Nov. 28, Dec. 11 - Dec. 31	79	Sept. 16 - 24	9	0	0	0	0	1995
1996	Dec. 4 - 15	12	Oct. 1 - Dec. 3, Dec. 16 - Dec. 31	79	Sept. 21 - 29	9	0	0	0	0	1996
1997	Dec. 3 - 14	12	Oct. 1 - Dec. 2, Dec. 15 - Dec. 31	79	Sept. 20 - 28	9	0	0	0	0	1997
1998	Dec. 2 - 13	12	Oct. 1 - Dec. 1, Dec. 14 - Dec. 31	79	Sept. 19 - 27	9	0	0	Jan. 9 - 10, 1999	2	1998
1999	Dec. 1 - 12	12	Oct. 1 - Nov. 30, Dec. 13 - Dec. 30	78	Sept. 18 - 30	13	0	0	Dec. 31 - Jan. 9, 2000	10	1999
2000	Nov. 29 - Dec. 10	12	Oct. 1 - Nov. 28, Dec. 11 - 31	79	Sept. 16 - 29	14	Sept. 30 - Oct. 1	2	Jan. 1 - 14, 2001	14	2000
2001	Nov. 28 - Dec. 9	12	Oct. 1 - Nov. 27, Dec. 10 - 31	79	Sept. 15 - 28	14	Sept. 29 - 30	2	Jan. 1 - 13, 2002	13	2001
2002	Dec. 4 - 15	12	Oct. 1 - Dec. 3, Dec. 16 - 31	79	Sept. 14 - 27	14	Sept. 28 - 29	2	Jan. 1 - 12, 2003	12	2002
2003	Dec. 3 - 14	12	Oct. 1 - Dec. 2, Dec. 15 -31	79	Sept. 13 - 26	14	Sept. 27 -28	2	Jan.1 - 4, 2004	4	2003
DMU 19 *	Oct. 18 - 26	9	Jan. 5 - 31	26							
2004	Dec. 1 - 12	12	Oct. 1 - Nov. 30, Dec. 13 - 31	79	Sept. 11 - 24	14	Sept. 25 - 26	2	Jan. 1 -2, 2005	2	2004
DMU 19 *	Oct. 16 -- 24	9	Jan. 3 - 31	28							
2005	Nov. 30 - Dec. 11	12	Oct. 1 - Dec. 31	91	Sept. 10 - 23	14	Sept. 24 - 25	2	Jan. 1 - 8, 2006	8	2005
DMU 19 *	Oct. 15 - 23	9	Jan. 9 - 31	23							
2006	Nov. 29 - Dec. 10	12	Oct. 1 - Dec. 31	91	Sept. 9 - 22	14	Sept. 23 - 24	2	Jan. 1 - 7, 2007	7	2006
DMU 19 *	Oct. 14 - 22	9	Jan. 8 - 31	23							
2007	Nov. 28 - Dec. 9	12	Oct. 1 - Dec. 31	91	Sept. 15 - 28	14	Sept. 29 - 30	2	Jan. 1 - 6, 2008	6	2007
DMU 19	Oct. 13 - 21	9	Jan. 7 - 31	24							
2008	Dec. 3 - 14	12	Sept. 22 - Dec. 31	100	Sept. 22 - Oct. 5	14	Sept. 13 - 21	9	Jan. 1 - 4, 2009	4	2008
DMU19	Oct. 11 - 19	9	Jan. 5 - 31	26							
2009	Dec. 2 - 13	12	Sept. 21 - Dec. 31	101	Sept. 21 - Oct. 4	14	Sept. 12 - 20	9	Jan. 1 - 10, 2010	10	2009
DMU 19	Oct. 10 - 18	9	Jan. 11 - 31	21					Jan. 1 - 17, 2010 (DMU 7, 8, &15)	17	
2010	Dec. 1 - 12	12	Sept. 20 - Dec. 31	100	Sept. 20 - Oct. 3	14	Sept. 11 - 19	9	Jan. 1 - 9, 2011	9	2010
DMU 19	Oct. 9 - 17	9	Jan. 10 - 31	22					Jan. 1 - 16, 2011 (DMU 7, 8, &15)	16	
2011	Nov. 30 - Dec. 11	12	Sept. 19 - Dec. 31	101	Sept. 19 - Oct. 2	14	Sept. 10 - 18	9	Jan. 1 - 8, 2012	8	2011
DMU 19	Oct. 8 - 16	9	Jan. 9 - 31	23					Jan. 1 - 15, 2011 (DMU 7, 8, &15)	15	

* Additional days of hunting opportunity in DMU 19

Table 4. History of deer permit availability and harvest in Kansas, 1994 to 2011.

Permit Type	1994*	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
RESIDENT																		
Limited Quota																		
Any Deer	25,380	26,995	27,850	31,150	37,200	40,000	45,175	4,373	3,270	2,855	2,439	2,440	2,453	2,477	2,585	2,490	2,290	2,300
Buck Only	5,850	5,000	5,250	4,675	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W-T Either Sex	3,900	5,480	6,180	7,800	8,605	11,030	14,420	0	0	0	0	0	0	0	0	0	0	0
W-T Buck Only	1,220	670	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muzzleloader	3,000	3,350	3,645	3,945	4,755	5,140	5,985	1,186	1,172	1,024	1,049	841	778	756	0	0	0	0
Antlerless Only	2,950	4,785	8,835	13,835	9,660	8,760	12,405	1,385	1,223	903	174	0	0	102	100	100	498	519
W-T Antlerless Only	300	600	1,750	2,920	5,055	4,330	6,611											
Sub-total	42,600	46,880	53,830	64,325	65,275	69,260	84,596	6,944	5,665	4,782	3,662	3,281	3,231	3,335	2,685	2,590	2,788	2,819
Unlimited Availability Permit Sales																		
Hunt-Your-Own-Land	13,881	14,654	15,507	16,407	16,521	16,119	16,151	12,658	11,983	8,962	8,719	9,120	8,440	8,312	5,951	5,623	5,989	5,890
W-T Either Sex								45,395	41,662	49,293	49,371	53,127	53,161	53,412	72,074	74,713	76,189	78,166
Muzzleloader															962	968	962	1,045
Game Tags Residents)	3,119	4,734	4,872	4,634	29,707	49,200	58,764	94,116	79,870	62,275	52,354	45,362	47,642	46,939	0	0	0	0
WT Antlerless Only								1,874	1,959	1,074	2,567	3,615	4,407	4,346	51,558	56,232	57,706	61,622
STWD Archery	16,156	16,106	16,429	16,299	17,330	19,180	19,831	17,315	17,340	17,134	17,822	18,458	19,497	20,175	7,493	7,093	6,563	6,565
Unit Archery	4,656	4,742	5,106	5,434	3,093	1,756	1,837											
Sub-total	37,812	40,236	41,914	42,774	66,651	86,255	96,583	171,358	152,814	138,738	130,833	129,682	133,147	133,184	138,038	144,629	147,409	153,288
Sub-total Residents	80,412	87,116	95,744	107,099	131,926	155,515	181,179	178,302	158,479	143,520	134,495	132,963	136,378	136,519	140,723	147,219	150,197	156,107
NON RESIDENT																		
Antlered (Firearms)	415	385	451	645	986	1,587	3,678	3,965	4,347	4,086	6,432	7,304	8,694	9,725	7,553	8,166	7,866	7,657
Either Species ES (MZ)	18	0	43	141	154	237	461	240	244	159	194	197	221	241	164	132	133	133
White-tailed ES (MZ)															1,727	2,062	2,291	1,997
Antlered (HOL)	207	245	268	520	700	1,026	1,190	1,166	1,372	1,570	1,706	2,026	2,258	2,531	2,583	2,283	3,094	3,288
Antlerless (Firearms)	115	45	241	775	646	632	906	900	728	840	1,101	350	411	421	3,536	3,968	4,273	5,706
Game Tags Nonresidents)						938	4,743	5,977	5,929	4,416	8,553	4,061	4,990	5,689	0	0	0	0
WT ES (Archery)	415	385	451	645	814	866	2,877	2,977	2,600	2,601	3,258	3,745	4,248	4,884	7,566	10,331	10,948	10,919
ES ES (Archery)															122	154	133	133
Antlerless (Archery)	115	45	241	775	271	154	207	0	0	0	0	0	0	0	0	0	0	0
Sub-total	1,285	1,105	1,695	3,501	3,571	5,440	14,062	15,225	15,220	13,672	21,244	17,683	20,822	23,491	23,251	27,096	28,738	29,833
Percent of Permits to NR	1.6	1.3	1.7	3.2	2.6	3.4	7.2	7.9	8.8	8.7	13.6	11.7	13.2	14.7	14.2	15.5	16.1	16.0
GRAND TOTAL	81,697	88,221	97,439	110,600	135,497	160,955	195,241	193,527	173,699	157,192	155,739	150,646	157,200	160,010	163,974	174,315	178,935	185,940

History of deer harvest in Kansas, 1994 to 2008.

Permit Type	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Regular Firearms (Res)	25,500	27,700	31,200	39,600	40,700	44,700	38,548	27,493	22,561	24,313	28,655	31,885	33,912	31,172	41,845	41,835	44,479	44,428
Hunt-Own-Land (Res + NR)	8,400	8,900	8,800	10,400	10,900	12,000	11,732	7,114	5,370	4,754	5,650	5,344	5,571	5,002	4,739	4,207	4,945	5,091
Antlerless Tags (Res + NR)	1,800	2,500	3,100	2,800	20,300	31,000	44,216	56,164	43,002	30,372	29,328	22,354	22,427	20,422	21,134	27,598	26,632	35,017
Regular Firearms (NR)	340	290	450	640	1,200	1,600	4,776	2,768	2,832	2,672	3,867	4,170	5,596	5,501	4,872	5,711	5,327	5,955
Archery (Res + NR)	7,800	7,200	8,500	9,700	8,000	12,000	11,887	8,045	9,147	9,172	9,435	11,157	11,685	11,584	7,900	7,696	7,655	7,447
Grand Total	43,840	46,590	52,050	63,140	81,100	101,300	111,159	101,584	82,912	71,283	76,935	74,910	79,191	73,681	80,490	87,047	89,038	97,938

* First year of non-resident deer hunting in Kansas.

The basic deer hunter harvest survey in Kansas is an on-line survey that covers all permits a hunter might purchase. A sample of hunters is selected for this survey. People are contacted by the email address in the KOALS database. The survey is written in SurveyMonkey. Our sample consisted of four groups of 8,675 deer hunters (n = 34,700). Each group was contacted four times by email. Due to non-deliverable addresses and duplication of email addresses (SurveyMonkey will not contact a second or more hunter having the same email address). We contacted 31,957 hunters of which 392 opted out of SurveyMonkey and 19,980 responded for a response rate of 62.5%..

In addition to the basic email survey, we send paper surveys to 2,011 deer hunters that did not have an email address associated with their license data and we sent a paper survey to 1,723 of the non-respondents to the email survey. We also surveyed 3,499 resident bowhunters with a paper survey. They were contacted before the season and asked to gather wildlife observations using a diary as well as being given a deer hunter report card. Among the people contacted with a paper survey, usable responses were received from 731 of the hunters without an email address (36.4% response rate), 425 of the non-response email sample (24.7% response rate), and 1,182 of the resident bowhunters (33.8% response rate). I have not completed the analysis to compare paper survey results with online results for 2011. No significant difference was detected between paper and online last year.

The estimate of the number of deer killed by hunters in Kansas during the 2011-12 seasons was 97,775. That was 8.9% above the corresponding estimate made of the harvest in 2010-11. Table 5 shows the success rates of the various permit hunt types and the breakdown of the harvest by species and age sex category. Table 6 shows the number of deer taken statewide by permit type.

The hunting regulations in 2010-11 once again allowed deer hunters flexibility to use a variety of equipment and conduct activities during a variety of seasons. We cannot use the permit type to classify hunters to an equipment category. A white-tailed either sex permit which before 2008 was considered a firearms permit will now allow a hunter to use muzzleloader or archery equipment and hunt during those additional seasons. As in previous years, all unfilled permits converted to a firearm permit during the extended season for antlerless white-tailed deer. Therefore permits named "archery" may be used at some times with a firearm. Table 7 shows the harvest by equipment by hunters with the various permit types. Table 8. shows the harvest in the various deer management units.

Hunter satisfaction has been monitored using our post season harvest survey and a five-point Likert scale to a simple question; "Describe your satisfaction with your 2011-12 deer hunt in Kansas." The five choices are: Extremely Satisfied, Satisfied, Neutral, Dissatisfied and Extremely Dissatisfied. This is an annual gauge for deer hunters. Periodically more in-depth surveys are specifically designed and conducted to gather more information. Typically non-resident

deer hunters indicate higher satisfaction than resident deer hunters. That was observed again this year with 79.4% of the non-residents indicating that they were extremely satisfied or satisfied and 8.5% indicated they were dissatisfied or extremely dissatisfied, whereas 71.96% of the residents selected the satisfied levels and 12.3% picked the levels expressing dissatisfaction.

Table 5. Success rate of hunters using various permit hunt types during the 2011 - 2012 deer season in Kansas.

On-Line sample only, 19,955 of 32,715 contacted by email through Survey Monkey.

			Percent of the Harvest in Species and Sex Category									
			White-tailed Deer					Mule Deer				
RES	STWD Total Permit Type	Permit Success Rate	Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds	Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds
KS	Any Deer, Gen Res	69.2%	35.16%	0.78%	7.23%	0.20%	0.00%	51.17%	0.20%	4.10%	0.39%	0.78%
KS	Any Deer, LO/Ten	65.9%	32.58%	0.00%	7.87%	0.00%	0.00%	57.30%	1.12%	0.00%	0.00%	1.12%
KS	Any Deer, Youth	87.5%	26.92%	0.00%	7.69%	3.85%	3.85%	57.69%	0.00%	0.00%	0.00%	0.00%
KS	Any Season W-T Either Sex, Gen Res	52.6%	69.52%	2.70%	25.86%	0.88%	0.88%	0.14%	0.00%	0.04%	0.00%	0.00%
KS	Any Season W-T Either Sex, LO/Ten	53.6%	71.66%	1.72%	23.56%	1.60%	0.98%	0.49%	0.00%	0.00%	0.00%	0.00%
KS	Any Season W-T Either Sex, Youth	57.1%	68.92%	4.05%	21.62%	3.38%	1.35%	0.68%	0.00%	0.00%	0.00%	0.00%
KS	Muzzleloader, Gen Res	58.9%	25.71%	0.95%	12.38%	0.00%	0.00%	52.38%	0.00%	6.67%	0.00%	1.90%
KS	Muzzleloader, LO/Ten	60.6%	25.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00%	10.00%	0.00%	5.00%
KS	Muzzleloader, Youth	75.0%	33.33%	0.00%	0.00%	0.00%	0.00%	66.67%	0.00%	0.00%	0.00%	0.00%
KS	HOL	54.1%	56.16%	1.83%	15.98%	1.14%	1.37%	20.32%	0.23%	2.51%	0.00%	0.46%
KS	STWD Archery, Gen Res	42.4%	70.43%	0.78%	18.68%	0.00%	1.17%	8.56%	0.00%	0.00%	0.39%	0.00%
KS	STWD Archery, LO/Ten	46.5%	66.10%	0.00%	28.81%	0.00%	0.00%	5.08%	0.00%	0.00%	0.00%	0.00%
KS	STWD Archery, Youth	38.5%	60.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%	0.00%	0.00%
KS	WTAO, General Resident	44.4%	0.00%	7.24%	85.61%	5.73%	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%
KS	WTAO, Youth	37.7%	0.00%	13.85%	78.46%	4.62%	3.08%	0.00%	0.00%	0.00%	0.00%	0.00%
KS	ESAO Adult	55.2%	0.00%	0.00%	29.21%	3.37%	1.12%	0.00%	1.12%	62.92%	2.25%	0.00%
KS	ESAO Youth	50.0%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NR	Firearms W-T Either Sex, Draw	60.7%	93.14%	0.53%	5.19%	0.40%	0.67%	0.07%	0.00%	0.00%	0.00%	0.00%
NR	Firearms W-T Either Sex, Leftover	55.0%	93.31%	0.00%	4.18%	1.26%	0.84%	0.00%	0.00%	0.42%	0.00%	0.00%
NR	Muzzleloader, Draw	52.7%	92.99%	1.08%	4.85%	0.27%	0.54%	0.27%	0.00%	0.00%	0.00%	0.00%
NR	Muzzleloader, Leftover	47.0%	90.16%	1.64%	6.56%	0.00%	1.64%	0.00%	0.00%	0.00%	0.00%	0.00%
NR	Muzzleloader, ESES	59.7%	22.50%	0.00%	0.00%	0.00%	0.00%	67.50%	0.00%	7.50%	0.00%	2.50%
NR	HOL	57.3%	79.90%	0.96%	10.53%	0.96%	0.48%	5.74%	0.00%	0.96%	0.48%	0.00%
NR	HOL Special	56.9%	63.27%	1.33%	15.04%	0.44%	0.44%	19.03%	0.00%	0.44%	0.00%	0.00%
NR	HOL NR Tenant	49.1%	78.31%	0.00%	10.84%	0.00%	2.41%	8.43%	0.00%	0.00%	0.00%	0.00%
NR	Archery, Draw	41.9%	93.15%	0.24%	5.66%	0.18%	0.72%	0.06%	0.00%	0.00%	0.00%	0.00%
NR	Archery, Leftover	33.6%	89.67%	0.67%	9.00%	0.33%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%
NR	Archery, ESES	45.0%	61.11%	0.00%	0.00%	2.78%	0.00%	36.11%	0.00%	0.00%	0.00%	0.00%
NR	WTAO	41.8%	0.00%	2.61%	92.93%	3.15%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%
NR	ESAO	35.6%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	4.76%	61.90%	0.00%	0.00%
KS	KS Sub-Total		42.58%	4.51%	48.70%	3.01%	1.20%	2.85%	0.02%	0.50%	0.03%	0.05%
NR	NR Sub-Total		73.60%	0.96%	23.68%	0.95%	0.82%	2.10%	0.02%	0.35%	0.02%	0.01%

Table 6. Number of deer harvested in Kansas during the 2011 - 2012 season by the permit hunt type of the hunter.

RES	Permit Type	White-tailed Deer						Mule Deer						Total WT Deer Harvested	Total Mule Deer Harvested	Percent Of WT Harvest That Was Antlerless	Percent Of MD Harvest That Was Antlerless	Grand Total For Permit Type
		Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds	Total Antlerless WTD	Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds	Total Antlerless MD					
KS	Any Deer	466	10	96	3	0	109	678	3	54	5	10	72	575	751	18.92%	9.66%	1,325
KS	Any Deer	85	0	20	0	0	20	149	3	0	0	3	6	105	155	19.44%	3.77%	261
KS	Any Deer	40	0	11	6	6	23	86	0	0	0	0	0	63	86	36.36%	0.00%	148
KS	W-T Either Sex	19,071	740	7,094	240	240	8,315	38	0	10	0	0	10	27,386	48	30.36%	20.00%	27,434
KS	W-T Either Sex	7,311	175	2,403	163	100	2,842	50	0	0	0	0	0	10,152	50	27.99%	0.00%	10,202
KS	W-T Either Sex	3,052	180	957	150	60	1,346	30	0	0	0	0	0	4,398	30	30.61%	0.00%	4,428
KS	Muzzleloader	126	5	61	0	0	65	257	0	33	0	9	42	192	299	34.15%	14.06%	491
KS	Muzzleloader	22	0	0	0	0	0	52	0	9	0	4	13	22	65	0.00%	20.00%	86
KS	Muzzleloader	17	0	0	0	0	0	35	0	0	0	0	0	17	35	0.00%	0.00%	52
KS	HOL	1,822	59	519	37	44	659	659	7	81	0	15	104	2,482	763	26.57%	13.59%	3,245
KS	STWD Archery	1,566	17	415	0	26	459	190	0	0	9	0	9	2,024	199	22.65%	4.35%	2,223
KS	STWD Archery	343	0	150	0	0	150	26	0	0	0	0	0	493	26	30.36%	0.00%	519
KS	STWD Archery	64	0	0	0	0	0	21	0	21	0	0	21	64	42	0.00%	50.00%	106
KS	WTAO General	0	2,172	25,665	1,717	424	29,978	0	0	0	0	0	0	29,978	0	100.00%	#DIV/0!	29,978
KS	WTAO Youth	0	241	1,366	80	54	1,741	0	0	0	0	0	0	1,741	0	100.00%	#DIV/0!	1,741
KS	ESAO Adult	0	0	88	10	3	102	0	3	190	7	0	200	102	200	100.00%	100.00%	302
KS	ESAO Youth	0	0	21	0	0	21	0	0	0	0	0	0	21	0	100.00%	#DIV/0!	21
NR	W-T Either Sex	3,611	21	201	15	26	263	3	0	0	0	0	0	3,874	3	6.80%	0.00%	3,877
NR	W-T Either Sex	746	0	33	10	7	50	0	0	3	0	0	3	796	3	6.30%	100.00%	800
NR	Muzzleloader	929	11	48	3	5	67	3	0	0	0	0	0	996	3	6.76%	0.00%	999
NR	Muzzleloader	177	3	13	0	3	19	0	0	0	0	0	0	197	0	9.84%	#DIV/0!	197
NR	Muzzleloader ESES	19	0	0	0	0	0	56	0	6	0	2	8	19	65	0.00%	12.90%	83
NR	HOL	541	6	71	6	3	87	39	0	6	3	0	10	628	49	13.92%	20.00%	677
NR	HOL Special	550	12	131	4	4	150	165	0	4	0	0	4	700	169	21.43%	2.27%	870
NR	HOL NR Tenant	234	0	32	0	7	40	25	0	0	0	0	0	274	25	14.47%	0.00%	299
NR	Archery	3,404	9	207	7	26	248	2	0	0	0	0	0	3,653	2	6.80%	0.00%	3,655
NR	Archery	791	6	79	3	3	91	0	0	0	0	0	0	882	0	10.33%	#DIV/0!	882
NR	Archery ESES	37	0	0	2	0	2	22	0	0	0	0	0	39	22	4.35%	0.00%	61
NR	WTAO	0	76	2,716	92	38	2,923	0	0	0	0	0	0	2,923	0	100.00%	#DIV/0!	2,923
NR	ESAO	0	0	18	0	0	18	0	3	33	0	0	35	18	35	100.00%	100.00%	53
KS	KS Sub-Total	33,985	3,599	38,866	2,406	958	45,829	2,272	16	398	21	42	477	79,813	2,749	57.42%	17.34%	82,562
NR	NR Sub-Total	11,041	144	3,551	142	123	3,959	315	3	53	3	2	61	15,000	376	26.40%	16.13%	15,375
	STWD Total	45,025	3,743	42,418	2,547	1,080	49,788	2,587	19	451	24	44	537	94,813	3,125	52.51%	17.19%	97,938

Table 7. Number of deer taken by equipment type by hunters with various permit type in Kansas, 2011.

On-Line sample only, 19,955 of 32,715 contacted by email through Survey Monkey.

STWD		Compound Bow	Recurve / Long Bow	Archery Unspecified	In-Line MZ	Traditional MZ Unspecified	MZ	Centerfire Rifle	Shotgun & Slug	Pistol	Cross Bow Unspecified	Firearms Unspecified	Total
KS	Any Deer, Gen Res	3	0	0	5	3	0	1,301	3	3	0	0	1,317
KS	Any Deer, LO/Ten	0	0	0	3	0	0	257	0	0	0	0	260
KS	Any Deer, Youth	0	0	0	0	0	0	148	0	0	0	0	148
KS	Any Season W-T Either Sex, Gen Res	5,371	58	0	990	183	0	20,534	144	48	96	0	27,424
KS	Any Season W-T Either Sex, LO/Ten	1,652	38	0	150	50	0	8,208	25	38	38	0	10,197
KS	Any Season W-T Either Sex, Youth	628	30	0	60	0	0	3,678	30	0	0	0	4,425
KS	Muzzleloader, Gen Res	0	0	0	402	80	0	9	0	0	0	0	491
KS	Muzzleloader, LO/Ten	0	0	0	69	4	0	13	0	0	0	0	86
KS	Muzzleloader, Youth	0	0	0	35	17	0	0	0	0	0	0	52
KS	HOL	266	7	0	52	7	0	2,878	15	0	15	0	3,241
KS	STWD Archery, Gen Res	1,860	104	0	0	0	0	234	0	0	26	0	2,223
KS	STWD Archery, LO/Ten	414	18	0	0	0	0	79	0	0	9	0	519
KS	STWD Archery, Youth	84	0	0	0	0	0	21	0	0	0	0	105
KS	WTAO, General Resident	6,182	211	0	1,097	211	0	21,747	111	171	151	0	29,882
KS	WTAO, Youth	426	27	0	53	27	0	1,172	0	0	27	0	1,731
KS	ESAO Adult	22	2	0	40	7	0	226	2	2	0	0	301
KS	ESAO Youth	0	0	0	0	0	0	21	0	0	0	0	21
NR	Firearms W-T Either Sex, Draw	23	3	0	15	3	0	3,817	8	3	0	0	3,872
NR	Firearms W-T Either Sex, Leftover	0	0	0	0	3	0	791	0	3	0	0	797
NR	Muzzleloader, Draw	0	0	0	911	75	0	11	0	0	0	0	997
NR	Muzzleloader, Leftover	6	0	0	174	13	0	3	0	0	0	0	196
NR	Muzzleloader, ESES	0	0	0	75	8	0	0	0	0	0	0	83
NR	HOL	217	3	0	6	3	0	444	0	3	0	0	677
NR	HOL Special	150	0	0	15	4	0	696	0	0	4	0	870
NR	HOL NR Tenant	76	0	0	7	0	0	209	7	0	0	0	299
NR	Archery, Draw	3,459	91	0	2	2	0	15	0	0	83	0	3,652
NR	Archery, Leftover	834	15	0	3	0	0	6	0	0	24	0	881
NR	Archery, ESES	56	3	0	0	0	0	2	0	0	0	0	61
NR	WTAO	1,311	60	0	162	16	0	1,346	0	3	16	0	2,914
NR	ESAO	13	1	0	9	0	0	29	0	0	0	0	52
KS	KS Sub-Total	16,907	494	0	2,956	588	0	60,526	329	262	361	0	82,423
NR	NR Sub-Total	6,145	177	0	1,380	127	0	7,369	15	12	126	0	15,351
	Total	23,052	671	0	4,336	716	0	67,895	344	274	487	0	97,775

Table 8. Hunter harvest of deer in the various deer management units of Kansas, 2011.

	White-tailed Deer						Mule Deer						Total WT Deer Harvested	Total Mule Deer Harvested	Percent Of WT Harvest That Was Antlerless	Percent Of MD Harvest That Was Antlerless	Grand Total For Permit Type
	Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds	Total Antlerless WTD	Antlered Buck	Male Fawn	Adult doe	Female Fawn	Buck With Sheds	Total Antlerless MD					
DMU 1	1,469	92	1,335	112	2	1,541	934	7	148	17	9	181	3,010	1,114	51.2%	16.2%	4,125
DMU 2	1,068	94	1,053	123	15	1,286	547	3	84	3	14	104	2,354	651	54.6%	16.0%	3,005
DMU 3	2,425	218	2,384	129	37	2,769	322	0	82	3	8	93	5,194	415	53.3%	22.4%	5,609
DMU 4	1,315	162	1,157	95	26	1,440	60	0	11	0	2	13	2,755	73	52.3%	18.2%	2,828
DMU 5	1,858	52	1,568	57	38	1,715	62	0	10	0	0	10	3,574	72	48.0%	13.9%	3,646
DMU 6	1,328	51	1,092	53	10	1,206	8	0	0	0	0	0	2,534	8	47.6%	0.0%	2,543
DMU 7	2,913	249	3,055	173	85	3,561	5	0	3	0	7	10	6,474	16	55.0%	65.3%	6,490
DMU 8	3,296	254	2,895	193	70	3,412	0	0	0	0	0	0	6,708	0	50.9%	#DIV/0!	6,708
DMU 9	2,414	131	1,530	127	37	1,825	0	0	0	0	0	0	4,239	0	43.0%	#DIV/0!	4,239
DMU 10	1,987	184	1,928	110	45	2,267	0	0	0	0	0	0	4,254	0	53.3%	#DIV/0!	4,254
DMU 11	6,892	859	6,964	456	186	8,465	0	0	0	0	0	0	15,357	0	55.1%	#DIV/0!	15,357
DMU 12	2,491	239	2,561	120	37	2,957	0	0	0	0	0	0	5,448	0	54.3%	#DIV/0!	5,448
DMU 13	679	92	785	33	27	937	0	0	0	0	0	0	1,616	0	58.0%	#DIV/0!	1,616
DMU 14	4,237	380	3,950	174	178	4,683	8	0	0	0	0	0	8,920	8	52.5%	0.0%	8,928
DMU 15	3,339	279	3,862	276	65	4,481	0	0	0	0	0	0	7,821	0	57.3%	#DIV/0!	7,821
DMU 16	2,589	63	1,982	42	23	2,109	12	0	0	0	0	0	4,698	12	44.9%	0.0%	4,711
DMU 17	2,169	97	1,303	15	97	1,513	505	8	66	0	3	76	3,682	581	41.1%	13.1%	4,263
DMU 18	682	10	463	10	14	496	78	0	30	0	0	30	1,179	107	42.1%	27.9%	1,286
DMU 19	1,826	216	2,520	245	83	3,063	5	0	0	0	0	0	4,889	5	62.7%	0.0%	4,894
	44,978	3,722	42,387	2,544	1,075	49,728	2,546	18	433	23	43	517	94,706	3,063			97,770

Legislative and Social Issues

Extensive changes in the deer permitting and regulation system were initiated for the 2008-09 deer hunting seasons. Most of those changes have received public support and reduced some of the efforts people traditionally made to modify the system from the legislature. Deer related vehicle accidents continue to shape the concerns of some legislators toward deer management.

Suggestions from hunters and landowners for changes in season length and timing are common. In addition the department receives various suggestions for changes in deer hunting regulations dealing with equipment, permit limitations, and tagging requirements. Law enforcement officers have requested that an antler tagging program be initiated in addition to the department's current carcass tagging program. As a result of these requests the department initiated a series of public meeting and incorporated questions into the deer hunter online survey.

Senate bill 314 was passed last year, in part as a result of some legislators' concern that the department was not moving fast enough to address their and their constituents desires. The bill also included a provision to extend the license buying age of hunters and fisherman from 65 to 75, something the department had requested. The deer management issues addressed in this bill included:

- A combo deer permit (2 tags, 1 for an antlerless deer)
- A pre-rut antlerless only season
- Legalization of crossbows during the archery deer season

Chronic Wasting Disease Management

The heads of deer and elk were collected from hunters and from vehicle accident locations by KDWPT personnel and contractors. Some taxidermists were also contractors and they assisted in collecting samples from older aged male deer. Focusing on that segment of the population should enhance our potential to detecting positive animals.

Retropharyngeal lymph nodes (RPLN) were submitted to the Veterinary Diagnostic Laboratory at Kansas State University (KSU) for ELISA screening. Confirmation IHC tests were conducted at the National Veterinary Services Laboratories in Ames, IA. Six clinical cases of sick deer were shipped to SCWDS and tested with IHC. The majority of the financial assistance for CWD surveillance was provided by the USDA APHIS VS, while standard deer health issues were handled under PR funds (W39R).

Samples were obtained from 2,442 wild cervids and CWD was detected in 8 white-tailed deer (Fig. 4). In 2001 the first positive animal was detected in a privately owned elk imported from Colorado. Since that time 47 CWD positive specimens have been detected in DMU 1, 1 in DMU 2, and 1 in DMU 3. This year they were detected in new counties of Trego, Ford and Stafford Counties in DMU 17 and DMU 5.

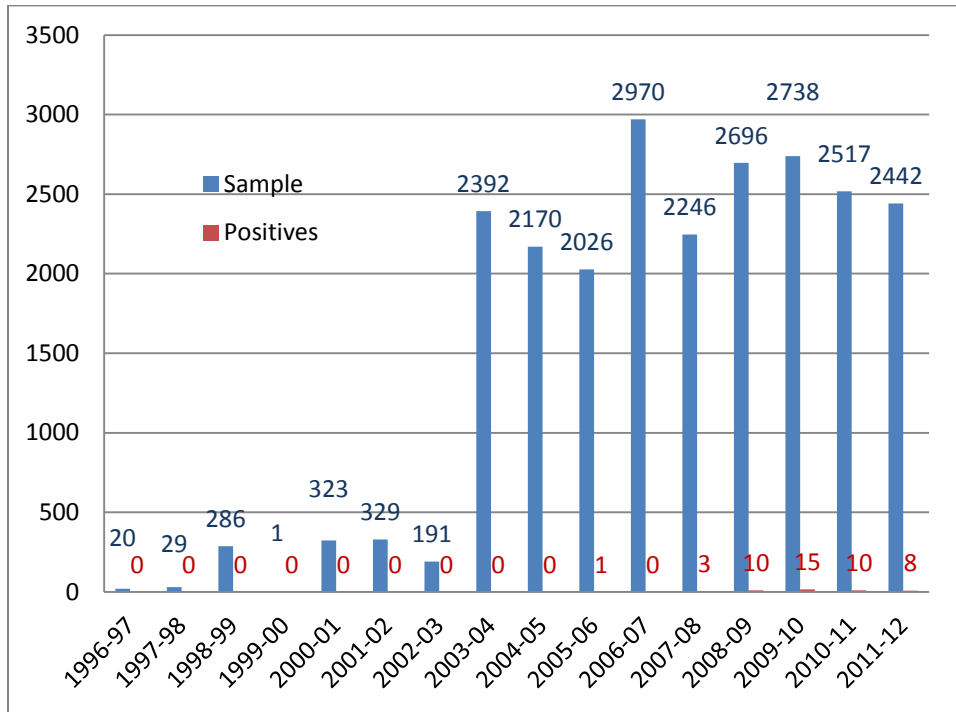


Figure 4. Number of deer and elk sampled and CWD positive animals detected by year in Kansas.



2012 Kentucky Report

Southeastern Deer Technical Committee Meeting

2011-2012 White-Tailed Deer Report

Prepared By: Gabe Jenkins

Gabriel.jenkins@ky.gov



I. 2011-2012 Harvest Results

Weapon Type	2011	1 Year % Change	3 Year % Change
Archery	18,167	9.1%	30.3%
Crossbow	1,969	29.5%	46.2%
Modern firearm	83,356	5.5%	-1.8%
Muzzle-loader	16,161	22.6%	22.0%
Overall	119,653	8.4%	5.5%

Weapon Type	Female	Male	Total	% Female
Archery	11,139	7,028	18,167	61%
Crossbow	1,232	737	1,969	63%
Modern firearm	31,569	51,787	83,356	38%
Muzzle-loader	9,789	6,372	16,161	61%
Overall	53,729	65,924	119,653	45%

Successful hunters	# deer harvested	% of successful hunters
69,776	1	84%
15,118	2	18%
3,444	3	4%
1,909	4+	2%
Total successful hunters:	90,247	
Average Hunter Harvests:	1.3 deer	

- Record harvest in the months of September and December.
- Highest Boone and Crocket submission year on record. A total of 66 record book entries (50 typical and 16 non-typical) were submitted in 2011.
 - The 66 entries came from 43 of Kentucky's 120 counties and represented all the regions of the state.
- 4% (4,501 deer) of the total harvest was harvested on public lands.

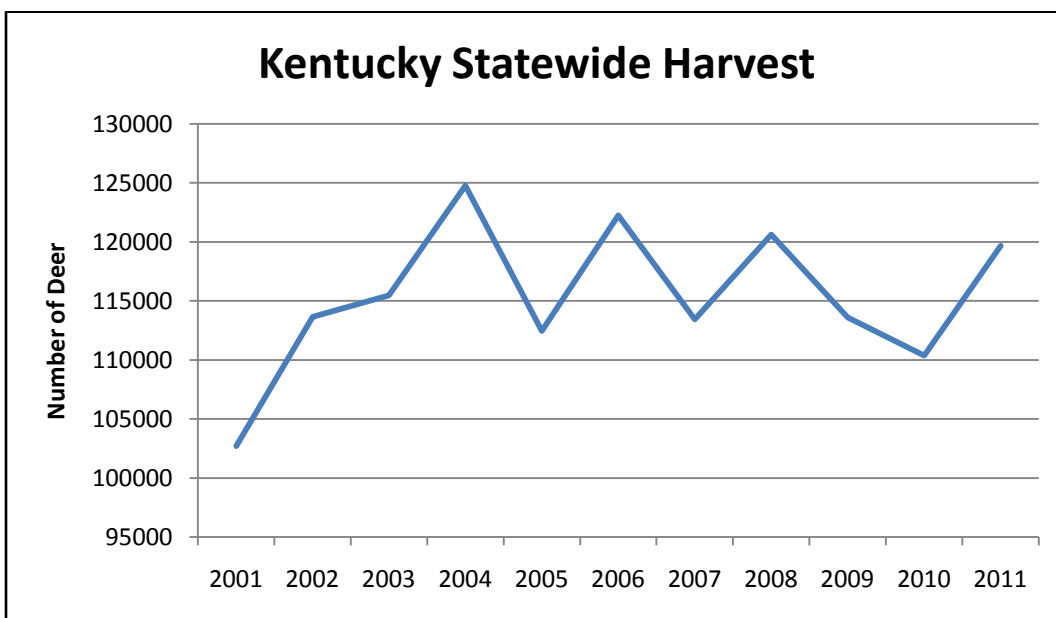
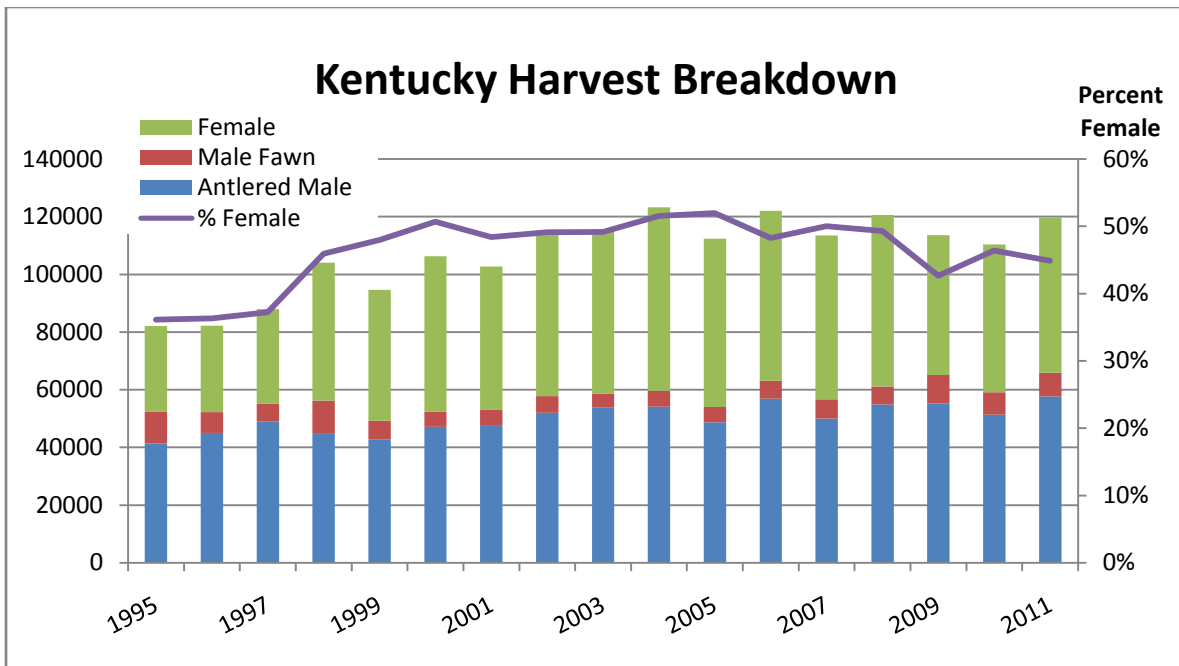
II. Historical Harvest

Statewide total deer harvest trends by weapon and sex, 1976-2011.

Year	Firearms*			% of Grand Total	Archery**			% of Grand Total	Grand Total	
	Males	Females	Total		Males	Females	Total		Total	Change
1976	3,042	434	3,476	100%					3,476	
1977	5,257	425	5,682	100%					5,682	63%
1978	5,633	379	6,012	93%	265	156	421		6,433	13%
1979	6,864	578	7,442	92%	426	194	620	8%	8,062	25%
1980	7,323	665	7,988	82%	1,004	710	1,714	18%	9,702	20%
1981	12,079	1,055	13,134	88%	1,145	704	1,849	12%	14,983	54%
1982	13,908	1,896	15,804	88%	1,308	857	2,165	12%	17,969	20%
1983	14,383	1,644	16,027	86%	1,607	1,098	2,705	14%	18,732	4%
1984	17,174	3,170	20,344	88%	1,650	1,018	2,668	12%	23,012	23%
1985	21,551	4,473	26,024	87%	2,724	1,327	4,051	13%	30,075	31%
1986	27,773	6,884	34,657	88%	3,144	1,719	4,863	12%	39,520	31%
1987	37,790	16,582	54,372	90%	3,831	2,169	6,000	10%	60,372	53%
1988	38,528	19,025	57,553	90%	4,444	2,263	6,707	10%	64,260	6%
1989	39,564	23,103	62,667	89%	4,887	2,595	7,482	11%	70,149	9%
1990	42,863	23,288	66,151	89%	4,798	2,969	7,767	11%	73,918	5%
1991	48,881	36,037	84,918	91%	3,979	4,037	8,016	9%	92,934	26%
1992	45,108	28,556	73,664	90%	4,243	4,031	8,274	10%	81,938	-12%
1993	41,809	19,738	61,547	89%	4,148	3,829	7,977	11%	69,524	-15%
1994	47,310	22,387	69,697	88%	4,427	4,665	9,092	12%	78,789	13%
1995	47,854	25,336	73,190	89%	4,591	4,359	8,950	11%	82,140	4%
1996	48,538	25,161	73,699	90%	3,760	4,696	8,456	10%	82,155	0%
1997	51,820	28,996	80,816	92%	3,350	3,776	7,126	8%	87,942	7%
1998	52,125	42,174	94,299	91%	4,115	5,656	9,771	9%	104,070	18%
1999	45,040	38,267	83,307	87%	4,396	7,524	11,920	13%	95,227	-8%
2000	48,212	45,572	93,784	88%	4,175	8,303	12,478	12%	106,262	12%
2001	48,747	41,233	89,980	88%	4,263	8,463	12,726	12%	102,706	-3%
2002	53,972	48,157	102,129	90%	3,837	7,686	11,523	10%	113,652	11%
2003	54,745	49,282	104,027	90%	3,943	7,487	11,430	10%	115,457	2%
2004	55,518	55,083	110,601	89%	4,754	9,247	14,001	11%	124,602	8%
2005	49,670	50,558	100,228	89%	4,322	7,864	12,186	11%	112,414	-10%
2006	57,630	49,055	106,685	87%	5,537	9,850	15,387	13%	122,072	9%
2007	51,368	46,780	98,148	87%	5,343	9,945	15,288	13%	113,436	-7%
2008	55,733	49,375	105,108	87%	5,431	10,071	15,502	13%	120,610	6%
2009	58,387	39,135	97,522	86%	6,757	9,305	16,062	14%	113,584	-6%
2010	52,254	39,951	92,205	84%	6,916	11,255	18,171	16%	110,376	-3%
2011	58,159	41,358	99,517	83%	7,765	12,371	20,136	17%	119,653	8%

* Includes muzzleloader and modern firearms.

** Records of archery harvest began in 1978. Includes crossbow harvest.

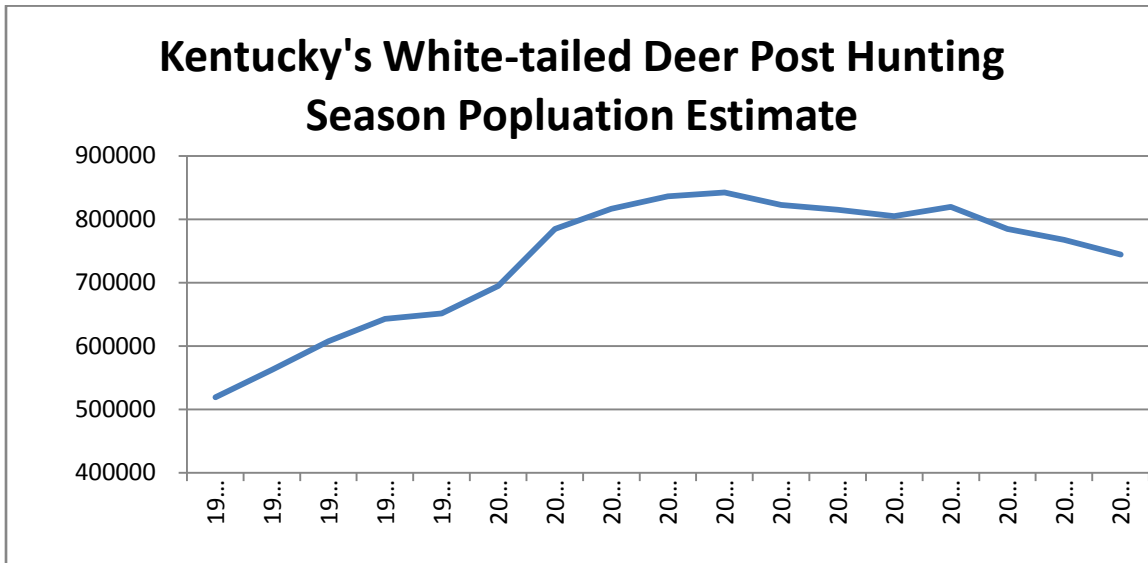


III. Changes for the upcoming season (12/13)

- Hunters allowed to harvest more than one deer a day on Wildlife Management Areas
- No hunt option, “buy a point” now available for deer quota hunts
- Hunters now can take their antlered deer on either their statewide tag or their bonus tag

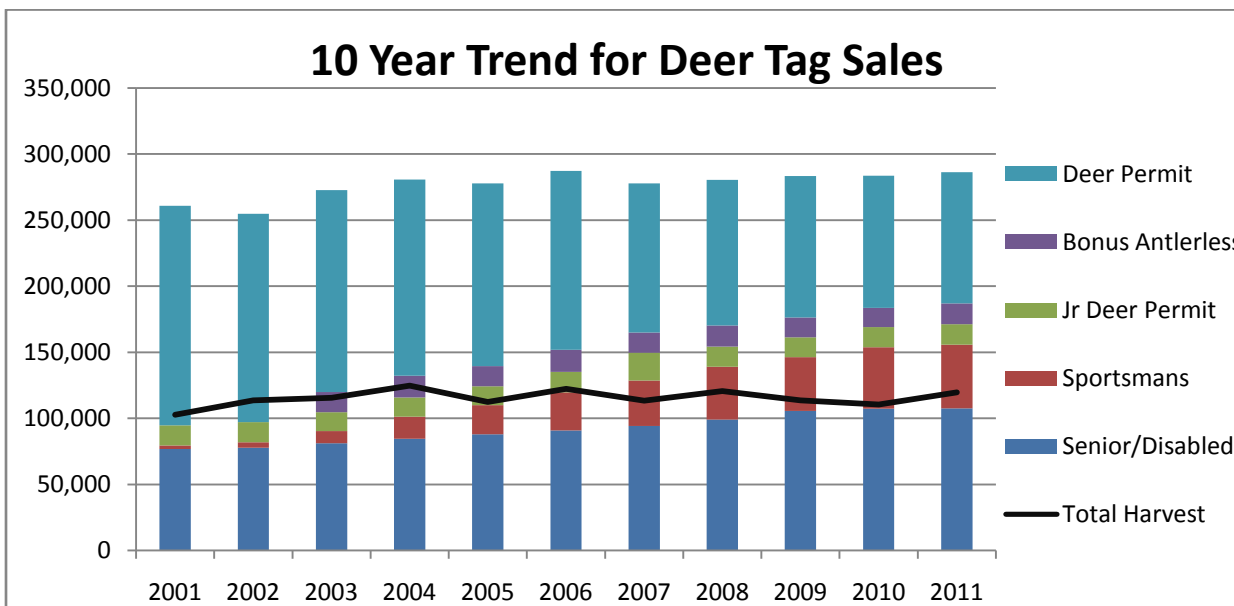
IV. Population Estimate

Current statewide estimate is 744,408 deer statewide, post 2011 hunting season. Estimate is generated from harvest data and age structure data. Deer check-in is done by phone or internet. Age structure information is collected by staff at meat lockers and by taxidermist.



V. License Sales

Experiencing a slow decline in overall purchased deer permits and an increase in Senior/Disabled permits. A senior/disable permit comes with every possible tag and license for \$5.



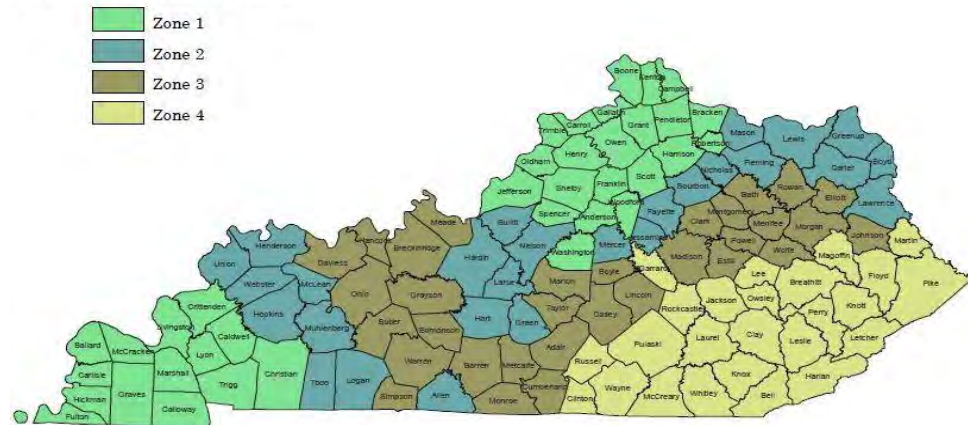
VI. General Information

Season Dates and Bag Limits

	Statewide	Zone 1	Zone 2	Zone 3	Zone 4
Modern Firearm		Nov 10-25	Nov 10-25	Nov 10-19	Nov 10-19
Archery		Sept 1- Jan 21	Sept 1- Jan 21	Sept 1- Jan 21	Sept 1- Jan 21
Early Crossbow		Oct 1-21	Oct 1-21	Oct 1-21	Oct 1-21
Late Crossbow		Nov 10-Dec 31	Nov 10-Dec 31	Nov 10-Dec 31	Nov 10-Dec 31
Early Muzzleloader		Oct 20-21	Oct 20-21	Oct 20-21	Oct 20-21
Late Muzzleloader		Dec 8-16	Dec 8-16	Dec 8-16	Dec 8-16
Youth-Only Firearms	Oct 13-14				
Free Youth Weekend	Dec 29-30				
Antlered Bag Limit	1				
Antlerless Bag Limit	Based upon zone	Unlimited	Up to 4	Up to 4, only 2 with a firearm	Up to 4. Only 2 with a firearm, which can only be filled during the last 3 days of the late muzzleloader

Deer Hunting Zones for 2011-2012

Proposed Deer Hunting Zones



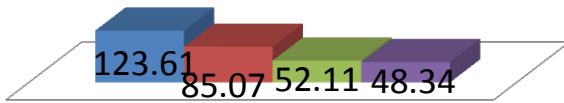
VII. Deer Zone 4 Research

- Over the last few years many zone 4 counties population estimate has been steadily declining. Despite reduction in doe hunting days, the estimate is still declining.
- In zone 4, you can harvest up to 4 does. Of those 4, only 2 can be harvested with a firearm. The only time you can use a firearm to harvest a doe is the last 3 days of the late muzzleloader season in December.
- What we found in analyzing the data:
 - Zone 4 has a high proportional number of does killed with a crossbow.

- Regardless of how short of a time we give hunters with a firearm, they will still harvest their antlerless deer.
- Being a zone 4 does not achieve what we need it too. No difference in doe harvest between zones 3 and 4.
- Management implications in zone 4?
 - Remove doe firearms harvest opportunity, restriction of doe harvest for archery/crossbow hunters?

Average Archery Doe Harvest per County by Zone

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4



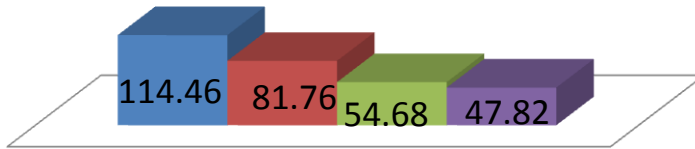
Average Crossbow Doe Harvest per County by Zone

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4



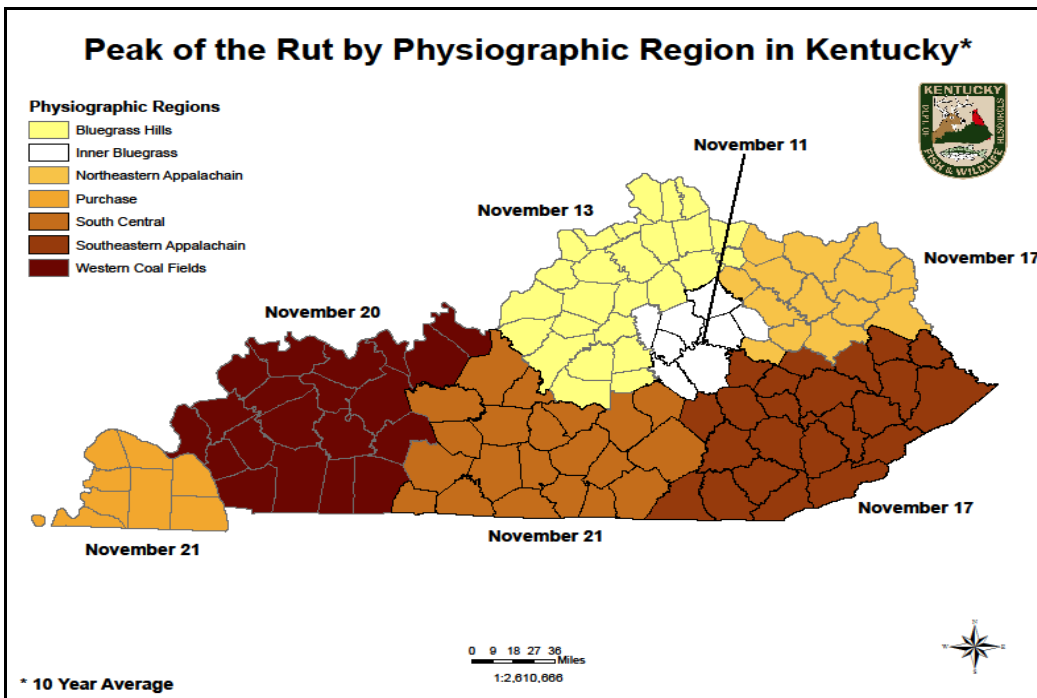
Average Muzzleloader Doe Harvest per County by Zone

■ Zone 1 ■ Zone 2 ■ Zone 3 ■ Zone 4



VIII. Fetus Data

Statewide Peak is November 17th.



IX. Regulation/Legislation Changes

- 2 County Deer Zone changes.
 - Rowan from zone 2 to zone 3
 - Lee from zone 3 to zone 4

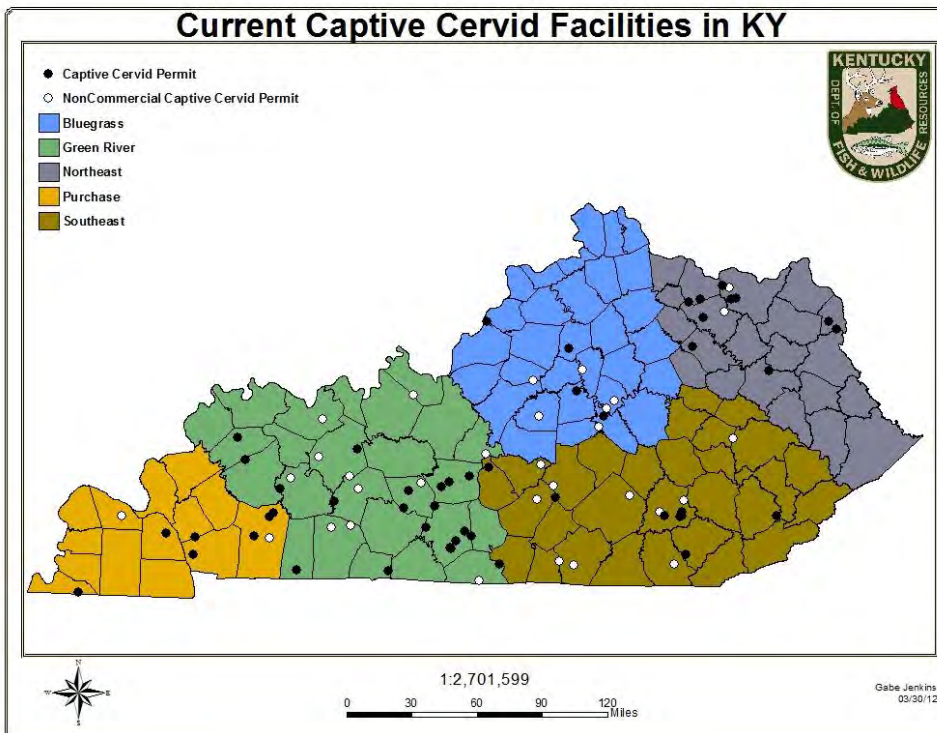
X. Deer/Vehicle Collisions

The number of deer-vehicle collisions by month over the last 8 years as reported by the Kentucky State Police

Month	2004	2005	2006	2007	2008	2009	2010	2011	Total	Average
January	180	243	195	224	198	183	175	199	1597	199.6
February	173	190	146	143	149	146	170	198	1315	164.4
March	162	167	186	159	186	159	194	195	1408	176.0
April	183	144	170	176	184	179	171	168	1375	171.9
May	184	193	220	178	220	206	197	234	1632	204.0
June	188	201	212	210	226	228	209	230	1704	213.0
July	154	133	145	171	164	130	153	136	1186	148.3
August	119	95	108	157	108	114	111	120	932	116.5
September	186	111	145	246	148	140	177	152	1305	163.1
October	393	401	370	348	428	374	461	350	3125	390.6
November	825	713	692	650	684	940	812	697	6013	751.6
December	320	252	339	255	263	271	288	297	2285	285.6
Total per year	3067	2843	2928	2917	2958	3070	3118	2976	23877	248.7
Injury Collisions	213	215	180	160	180	176	169	146	1439	179.9
Fatal Collisions	3	1	1	3	2	1	4	3	18	2.3

XI. Captive Cervids

- 81 approved facilities in the state.
- 50 Commercial facilities and 31 Non-commercial facilities



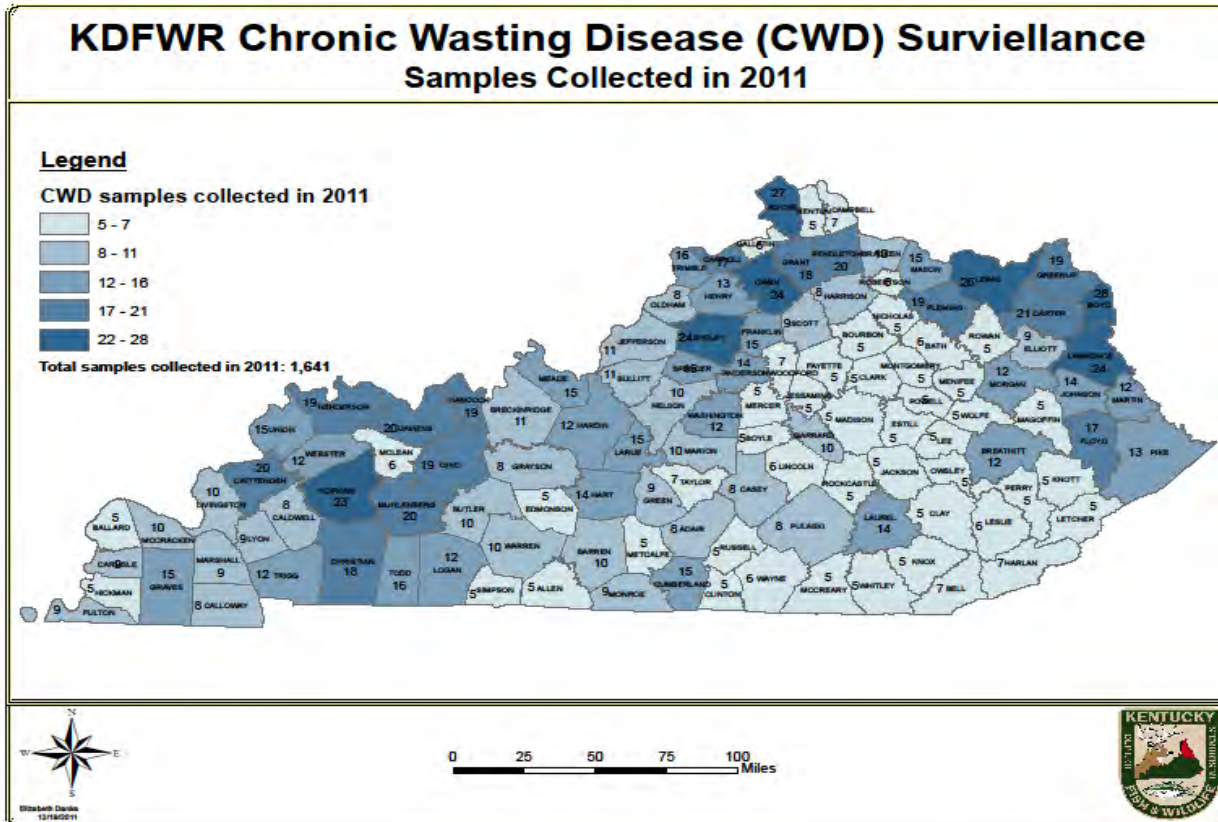
XII. Disease

EHD

Only a few EHD suspected deer deaths were reported in 2011. Most were reported in the central/western part of the state and one local area in the southeast. Only 1 deer was clinically diagnosed as EHDV-2 positive. Reports have been minimal the last few years since the widespread outbreak in 2007.

CWD

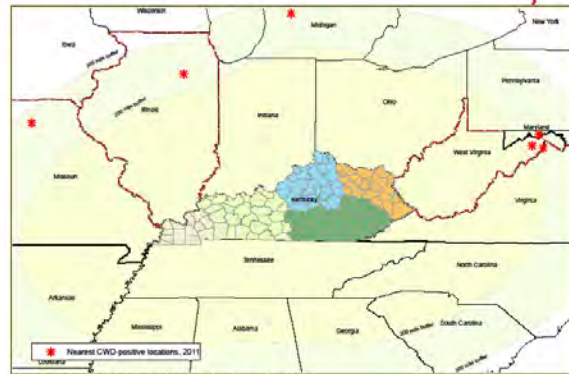
- Tested Over 22,000 animals since 2003
- 1601 White-tailed deer tested in 2011



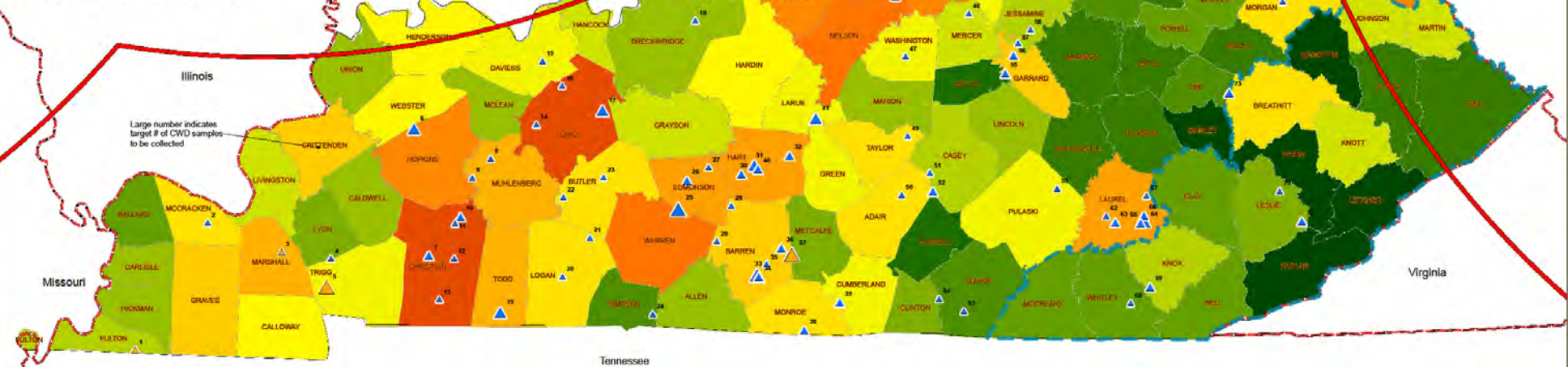
New Risk Assessment Strategy for CWD sampling.

- Due to loss of USDA funding and the increase cost of sample testing at SCWDS, a new CWD protocol has been developed. The new strategy will target more “higher risk” animals and focus less on hunter harvested animals.
- Assessment is based upon captive cervid locations, number of cervid transportation permits per facility, wild deer density estimates and proximity to CWD + areas.

Chronic Wasting Disease Risk Map - 2012



Nearest CWD Locations to Kentucky



Legend

CWD Risk Level

- Low (Dark Green)
- Moderate (Light Green)
- High (Yellow)
- Very High (Orange/Red)

Captive cervid facilities:

of white-tailed deer & elk

- < 10 (Small Blue Triangle)
- 11 - 50 (Medium Blue Triangle)
- 51 - 100 (Large Blue Triangle)
- 101 - 150 (Very Large Blue Triangle)
- 151 - 200 (Largest Blue Triangle)

Captive Cervids from CWD-positive States:

of white-tailed deer & elk

- < 10 (Small Orange Triangle)
- 10 - 50 (Medium Orange Triangle)
- 50 - 102 (Large Orange Triangle)

250-mile buffer around nearest CWD locations (Red Line)

Elk Zone (Red Square)

Adjacent CWD-positive states: Illinois, Missouri, West Virginia, Virginia

0 10 20 30 40 Miles

Facility Name	# WTD/Bk	Facility Name	# WTD/Bk	Facility Name	# WTD/Bk	Facility Name	# WTD/Bk	Facility Name	# WTD/Bk	Facility Name	# WTD/Bk
1 Lusk	Y/0	14 Hoover	3/0	27 Hogan	2/0	40 Yoder	41/0	53 Lowe	0/0	66 Bentley	21/0
2 Lundberg	0/9	15 Peacock	0/3	28 Childers	8/0	41 Straussner	Y/0	54 Denney	1/0	67 France	9/0
3 Holt	0/8	16 Daugherty	0/3	29 Poole	10/0	42 Wallace	0/1	55 Cole	24/0	68 Morris	6/0
4 USFSLBL	3/0	17 Kennedy	67/0	30 Miller	14/0	43 Middleton	19/0	56 Reece	0/32	69 Mbs	22/0
5 USFSLBL	30/30	18 Tobin	Y/0	31 Wengert	53/0	44 Swisher	1/0	57 Kindred	Y/0	70 Lewis	10/0
6 Donaldson	56/2	19 Miller, Jr	62/0	32 Murray	22/0	45 Salato	5/3	58 Peel	Y/0	71 Burton	0/0
7 Naughtin	25/4	20 Baugh	0/0	33 Smith	102/0	46 Life Adv Ctr	0/0	59 Sidwell	5/0	72 Burkhart	17/0
8 Marlin	Y/0	21 Barrow, Jr	3/1	34 South	24/0	47 Bobitt	Y/0	60 Wilson	5/0	73 Brewer	16/0
9 Whitaker	9/0	22 Wood	Y/0	35 Bartlett	6/0	48 Steele	5/0	61 Wright	5/0	74 Eddington	67/0
10 Badgett	12/0	23 Wan	Y/0	36 Judd	25/0	49 Yoder	6/0	62 Storm	Y/0	75 Overby	6/0
11 Badgett	1/0	24 Travelstead	5/0	37 England	125/0	50 Pike	4/0	63 Gray	19/0	76 Mast	31/0
12 Allison	0/5	25 Basham	144/0	38 Gee	13/0	51 Clements	10/0	64 Brock	62/0	77 Lutz	4/0
13 Stoltzrus	Y/0	26 Vincent	13/20	39 Ortega	45/0	52 Cundiff	26/0	65 Williams	15/0	78 Marler	34/0
										79 Barbour	1/0
										80 Pleasant	13/6
										81 Cropper	10/0
										82 Blevins, Jr.	47/0
										83 Reece	156/0



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XIII. Hot Topics

- **Kentucky's First Sandhill Crane Season (2011)**
 - **50 birds harvested with a quota of 400**
- **Black Bear chase season (2012)**
 - **Regulation change to allow 2 bear chase seasons. The late season being a kill season. Permits to be determined based on what is left from the regular bear firearm season quota.**
- **Elk Relocation Program**
 - **34 elk to Missouri**
 - **16 elk to Virginia**
- **3 new wildlife management areas in the state**
 - **Total of 5,500 acres.**
 - **2 of the areas were large hunt clubs that were intensively managed for trophy whitetails**



MICHIGAN DEER HARVEST SURVEY REPORT 2011 SEASONS

Brian J. Frawley

ABSTRACT

A survey of deer hunters was conducted following the 2011 hunting seasons to estimate hunter participation, harvest, and hunting effort. In 2011, an estimated 648,100 hunters spent 9.6 million days afield. Statewide, the number of people hunting deer decreased 1%, but their hunting effort was nearly unchanged between 2010 and 2011. Hunters harvested nearly 422,000 deer, an increase of about 1% from the number taken in 2010. Statewide, 45% of hunters harvested a deer in 2011, while hunter success was 44% in 2010. About 24% of the hunters took an antlerless deer and 30% took an antlered buck in 2011. About 15% of deer hunters harvested two or more deer. Statewide, less than 45% of hunters were satisfied with numbers of deer seen, bucks seen, deer taken, and their overall hunting experience in 2011. Statewide levels of satisfaction were little changed for all measures between 2010 and 2011; however, satisfaction generally increased among hunters in the Upper Peninsula (UP) and Northern Lower Peninsula (LP) and decreased among Southern LP hunters. About 118,600 hunters used a crossbow during the 2011 archery season, and they harvested about 54,900 deer with the crossbow. About 51% of deer hunters statewide supported antler point restrictions on buck harvest in the UP, and 56% of the hunters that preferred to hunt in the UP supported these restrictions in 2011. About 42% of deer hunters statewide supported antler point restrictions on buck harvest in Deer Management Unit (DMU) 487, and 45% of the hunters that preferred to hunt in the northeast LP supported these restrictions in 2011.

INTRODUCTION

The Natural Resources Commission (NRC) and Michigan Department of Natural Resources (DNR) have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are one of the management tools used to accomplish this statutory responsibility. Estimating hunter participation, harvest, and hunting effort



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

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Division of Federal Assistance, U.S. Fish & Wildlife Service, 4401 North Fairfax Drive, Mail Stop MBSP-4020, Arlington, VA 22203.

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This publication is available in alternative formats upon request.

(hereafter referred to as estimates) are the primary objectives of these surveys. Estimates derived from harvest surveys as well as information from deer harvest check stations, deer pellet group surveys, trends in deer-vehicle collisions, population modeling, and input received from the public are used to monitor deer populations and establish harvest regulations.

Estimating harvest, hunter numbers, and hunting effort were the primary objectives of the deer harvest survey. This survey also provided an opportunity to collect information about management issues. Questions were added to the questionnaire to investigate hunter satisfaction with the 2011 hunting season and deer numbers. Deer hunters were also asked whether they supported the antler point restrictions that were enacted in the UP and Deer Management Unit (DMU) 487 (northeast LP), and questions were added to investigate whether these restrictions had influenced deer hunting activity (hunting effort, harvest, and satisfaction).

During 2011, white-tailed deer (*Odocoileus virginianus*) could be harvested primarily during the following hunting seasons: early youth antlerless, 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) (Table 1).

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, except in DMU 487 where it could also be used to take an antlerless deer in the firearm and muzzleloader seasons (Table 1). 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 antlered deer during each season, except in DMU 487 where it could also be used to take two antlerless deer in the firearm and muzzleloader seasons (Table 1). 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 were adopted in 2008 for the taking of antlered deer (bucks) in the UP. 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 antler point restrictions) in the UP, all seasons combined, even if they purchased both archery and firearms licenses.

The same antler point restrictions that were adopted in the UP in 2008 were implemented in DMU 487 in the northeast LP in 2010. In addition, hunters in DMU 487 could use a firearm license or one or both combination license tags to take an antlerless deer during the firearm

or muzzleloader seasons. Deer Management Unit 487 included Alcona, Alpena, Iosco, Montmorency, Oscoda, and Presque Isle counties.

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 DMU designated at the time of purchase. Antlerless licenses were available for most of the state, except in seventeen DMUs (007, 017, 021, 027, 031, 036, 042, 048, 066, 117, 121, 127, 131, 149, 173, 249, and 349) in the UP and five DMUs (016, 025, 040, 069, and 072) in the LP. A limited number of 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 (Appendix A). Hunters could apply for an antlerless license through the drawing, purchase a private land license for selected areas without application, or wait to purchase a leftover license after the drawing, if available.

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. A private land license was not valid on land enrolled in the Commercial Forest Act program (Commercial Forest Lands). Hunters were limited to a maximum of five private land antlerless deer licenses, except for DMUs 486 and 487 where there was no seasonal limit. In addition, there was no seasonal limit for the number of public land antlerless licenses that could be purchased. Furthermore, hunters could purchase two private land antlerless deer licenses each day, except for private land antlerless licenses for DMUs 486 and 487 and public land antlerless licenses for DMU 452 where hunters could purchase five licenses each day.

Two new private land DMUs were created in 2009 to aid in the harvest of antlerless deer. Deer Management Unit 486 was a multi-county DMU in the southern LP. Deer Management Unit 486 included private land in DMUs 003, 008, 009, 011, 012, 013, 014, 019, 023, 025, 029, 030, 032, 033, 034, 037, 038, 039, 041, 044, 046, 047, 054, 056, 059, 061, 063, 070, 073, 075, 076, 078, 079, 080, 081, 162 and 173. A private land antlerless deer license for DMU 486 was valid on private land within any of these subunits. DMU 487 was the second new multi-county DMU and was located in the northeast LP. Deer Management Unit 487 included private land in DMUs 001, 004, 035, 060, 068, 071, 135 and 452. A private land antlerless deer license for DMU 487 was valid on private land within any of the eight subunits.

A public land antlerless deer hunting license allowed an individual to hunt for antlerless deer upon 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.

The Pure Michigan Hunt (PMH) was a unique multi-species hunting opportunity offered for the first time in 2010. Individuals could purchase an unlimited number of applications for the PMH. Three individuals were randomly chosen from all applications, and winners received

elk, bear, spring turkey, fall turkey, and antlerless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The antlerless deer hunting license was valid for all areas open for hunting antlerless deer and during all deer hunting seasons in which they were eligible to participate.

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.

A youth early antlerless firearm hunting season in DMU 486 occurred September 20-23, and was open on all lands within this DMU with the appropriate public or private-land antlerless license or DMA permit.

The youth firearm season was held during September 24-25 on public and private lands statewide. Youth hunters (10-16 years old) could take no more than one deer during the season. Youths 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 using either antlerless or combination hunting licenses and could only use archery equipment (included crossbows). For youths 12-16 years old, valid licenses included combination, firearm, or antlerless deer hunting licenses. Youths 12 and 13 years of age could use archery equipment or firearms, but hunters using either a firearm or crossbow were restricted to only private land and Commercial Forest Lands.

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, 2011, through January 1, 2012). 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 13-16, 2011. 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, or legally blind

people could participate in this season. A veteran with 100% disability also could take a deer during the youth firearm season (September 24-25).

The statewide regular firearm season occurred November 15-30. The muzzleloader season was held December 2-11 in the UP, December 9-18 in the Northern LP, and December 2-18 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 15-19. Hunters pursuing deer during this season 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 50 counties in the LP (Alcona, Allegan, Alpena, Antrim, Arenac, Barry, Bay, Berrien, Branch, Calhoun, Cass, Charlevoix, Clinton, Eaton, Genesee, Gratiot, Hillsdale, Huron, Ingham, Ionia, Iosco, Isabella, Jackson, Kalamazoo, Kent, Lapeer, Lenawee, Livingston, Macomb, Mecosta, Midland, Monroe, Montcalm, Montmorency, Muskegon, Newaygo, Oakland, Oceana, Oscoda, Ottawa, Presque Isle, Saginaw, St. Clair, St. Joseph, Sanilac, Shiawassee, Tuscola, Van Buren, Washtenaw, and Wayne). The counties open in 2011 were the same as in 2010.

The late antlerless firearm season occurred from December 19, 2011, through January 1, 2012. Hunters pursuing deer during this season 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. All counties open during the early antlerless firearm season were also open for the late antlerless firearm season. The area open to hunting during the 2011 late antlerless season was the same as in 2010.

Crossbows were legal to use during all archery and firearm seasons statewide, except in the UP, where crossbow use was prohibited during the late archery and muzzleloader seasons, unless the hunter was disabled. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit, did not need the stamp.

METHODS

The Wildlife Division provided all hunters the option to report information about their deer hunting activity voluntarily via the internet. This option was advertised through the hunting regulation booklet (digest) and on the DNR website, and an email message was sent to all license buyers that had provided an email address to the DNR. Hunters reported whether they hunted, the days spent afield, and whether they harvested a deer. Deer hunters were also asked whether they supported the antler point restrictions in the UP and DMU 487. Following the 2011 deer hunting seasons, a questionnaire was sent to 51,288 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 the same

questions as asked via the internet. 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.

Estimates were based primarily on information collected from random samples of hunting license buyers. Thus, these estimates were subject to sampling errors (Cochran 1977). Estimates were calculated using a stratified random sampling design (Cochran 1977) and were presented along with their 95% confidence limit (CL). In theory, this CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases.

License buyers were assigned to one of five groups (strata) based on the type of license purchased and season that it was valid. The first stratum consisted of people eligible only for the archery, regular firearm, and muzzleloader hunting seasons (N = 419,156). The second stratum consisted of people eligible to hunt during archery, regular firearm, muzzleloader, early antlerless, and late antlerless seasons (N = 227,008). The third stratum consisted of people eligible to hunt during archery, regular firearm, muzzleloader, late antlerless, and youth seasons (N = 38,561). The fourth stratum consisted of 1,259 people that were eligible to participate in the special disabled hunts. (Disabled hunters were not required to purchase a unique type of hunting license; however, disabled hunters younger than 65 years were sold a discounted hunting license [i.e., sold a senior hunting license]). The fifth stratum consisted of 5,231 people that had voluntarily reported information about their hunting activity via the Internet before the random sample was selected. The random sample consisted of 28,309 people from the first stratum; 14,944 from the second stratum; 6,892 from the third stratum; and 1,259 from the fourth stratum. The stratified sampling design accounted for the varying probabilities of being selected from the strata so estimates could be reliably extrapolated from the sample to all license buyers.

Estimates were calculated separately by the area where the hunt occurred. The state was divided into eight areas that closely matched the DNR's wildlife management administrative units (Figure 1). The state was also divided into three ecological regions (UP, Northern LP, and Southern LP). These regions generally matched major ecoregions (Albert 1995), except in the UP where two ecoregions were combined. Ecoregions are regions having similar soils, vegetation, climate, geology, and physiography. Estimates were also calculated for each DMU (Figure 2, Appendix B). Deer harvested from unknown locations were allocated among areas in proportion to the known harvest.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals were equivalent to stating that the difference between the means was

larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were initially mailed during mid-January 2012, and two follow-up questionnaires were mailed to nonrespondents. To increase the number of questionnaires returned, respondents that returned their questionnaire promptly became eligible to win a firearm or bow. Although 51,288 people were sent the questionnaire, 1,277 surveys were undeliverable resulting in an adjusted sample size of 50,011. Questionnaires were returned by 27,443 of people receiving the questionnaire (55% response rate).

Estimates of harvest, hunting effort, and hunter participation are affected by the willingness of people to complete and return their questionnaires. This problem can confound comparisons of estimates made between years if response rates vary greatly. The percentage of people returning their questionnaire this year was lower than some previous years. To reduce bias caused by this lower response rate, an adjustment was made on the 2011 estimates to make them comparable to the adjusted 2010 estimates (adjusted to a 74% response rate). Estimates of harvest, hunting effort, and hunter numbers were reduced by 5.1, 3.8, and 1.6%, respectively, to make estimates comparable to 2010. These reductions reflected the average decline noted between estimates calculated when 55 and 74% of the responses were used in 2000 and 2001 surveys.

RESULTS

In 2011, 691,215 people purchased a license to hunt deer in Michigan. The number of people buying a license in 2011 declined by about 1% from 2010 (697,529 people purchased a license in 2010). Most of the people buying a license were male (90%), and the average age of license buyers was 43 years (Figure 3). Nearly 10% (67,785) of the license buyers were younger than 17 years old. About 2% (10,928) of the license buyers were younger than 12 years old, which represented 16% of the hunters younger than 17 years old.

The number of people buying a license in 2011 declined by about 14% in ten years from 2001 (801,436 people purchased a license in 2001). There were fewer license buyers for most age classes between 14 and 49 years of age in 2011, compared to 2001 (Figure 4). However, there were increased hunter numbers among the youngest and oldest age classes in 2011. The increased hunter numbers in the oldest age classes likely represented the rising share of older people in the population as the baby-boom generation aged and life expectancies have increased. In addition, legalization of crossbow use during the archery season probably increased participation among hunters in the oldest age classes. The increased participation among the youngest hunters likely reflected the lowering of the minimum age requirements. In 2011, it was legal for 10 and 11 year olds to hunt deer with a firearm; while the hunters had to be at least 12 years old to participate in 2001.

The number of 2011 deer harvest tags sold for all license types combined decreased about 1% from 2010 (Table 2). License buyers were issued an average of 2.2 harvest tags. About 89% of the license buyers obtained three or fewer harvest tags, and greater than 98% had five or fewer harvest tags (Figure 5). Hunters most frequently obtained antlerless and

combination harvest tags (Figure 6). About 45% of the license buyers purchased at least one antlerless license (314,122 people), and greater than 98% of antlerless license buyers purchased three or fewer antlerless licenses, public and private licenses combined (Figure 7).

The antlerless license quota on private lands decreased 3% from 704,400 in 2010 to 683,700 licenses in 2011 (Appendix A). The quota for public land antlerless licenses increased less than 1% from 72,100 to 72,500 between 2010 and 2011. The number of antlerless licenses sold declined 4% between 2010 and 2011 (Table 2).

About $93.7 \pm 0.3\%$ (648,127 hunters) of the people buying a license in 2011 actually spent time hunting deer (Table 3). Most hunters (578,855) pursued deer during the regular firearm season (Figure 8). Statewide, the number of people hunting deer during all seasons combined decreased 1% from 2010.

A significantly greater number of people hunted during the late antlerless (26%), early antlerless (18%), and archery (5%) seasons during 2011 (Table 3). In contrast, significantly fewer people hunted during the regular firearm (-2%) season. The number of people hunting in the muzzleloader, early youth, youth, and disabled hunter seasons were nearly unchanged between 2010 and 2011.

About 47% of the days hunters spent pursuing deer throughout the state occurred in the archery season (Figure 10). About 39% of the hunting effort occurred during the regular firearm season. Nearly 13% of the hunting effort occurred in the muzzleloader and late antlerless seasons combined. Statewide, hunters devoted an average of 15.3 days afield hunting deer during all seasons combined (Table 4). Archers had the greatest number of days available to hunt deer (77 days) and devoted the greatest number of days afield ($\bar{x} = 14.5$ days/hunter) (Figure 11, Table 4). For all seasons combined, hunting effort statewide was nearly unchanged between 2010 and 2011 (Table 3). Hunting effort increased significantly during the late antlerless (30%) but decreased significantly during the regular firearm (-5%) season. Hunting effort was unchanged during the archery, muzzleloader, early antlerless, early youth, youth, and disabled seasons between 2010 and 2011.

Nearly 422,000 deer were harvested in 2011, an increase of about 1% from the number taken in 2010 (Figure 12, Tables 5-6). Statewide, the harvest of both antlerless and antlered deer in 2011 was nearly unchanged from 2010 (Table 5). Between 2010 and 2011, deer harvest increased significantly during the early antlerless (29%) and archery (12%) seasons. While harvest decreased significantly in the muzzleloader season by 12%. Deer harvest in the regular firearm, late antlerless, early youth, youth, and disabled seasons did not change significantly between 2010 and 2011.

About 51% of the deer harvested (sexes combined) in 2011 were taken during the regular firearm season (Figure 14). Nearly 43% of the antlerless deer and 60% of the antlered bucks were harvested in the regular firearm season. Hunters took 32% of the harvested deer (sexes combined) during archery season. During the archery season, hunters took 30% of the antlerless deer and 33% of the antlered bucks harvested. Few antlered bucks (5%) were

taken in the muzzleloader season. The early and late antlerless and muzzleloader seasons combined accounted for about 26% of the antlerless deer harvested.

About 87% of the animals harvested (sexes combined) in 2011 were taken on private lands (Table 7). Statewide, most of the antlerless deer (89%) and antlered bucks (84%) were harvested on private lands. Some noteworthy changes between 2010 and 2011 included increased harvest of deer on both public and private lands in the NLP and decreased take of antlered bucks on private land in the Southern LP.

Statewide, 45% of deer hunters harvested at least one deer (all deer seasons and sexes combined) in 2011 (Figure 15, Table 8), compared to 44% success in 2010. About 24% of hunters took an antlerless deer, and 30% took an antlered buck in 2011. About 15% of deer hunters harvested two or more deer.

Hunters were most successful in taking a deer during the archery (34% successful), regular firearm (33%), youth (32%), and early antlerless (29%) seasons (Figure 16, Table 9). Nearly 22% of hunters took an antlered buck and 14% harvested an antlerless deer during the regular firearm season. Hunter success was lowest in the disabled hunter (23%), muzzleloader (16%), and early youth antlerless (15%) seasons.

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 45% of hunters were satisfied with numbers of deer seen, bucks seen, deer taken, and their overall hunting experience in 2011 (Tables 10-11). Statewide levels of satisfaction were little changed for all measures between 2010 and 2011; however, satisfaction generally increased among UP and NLP hunters and decreased among SLP hunters.

Statewide, about 51% of hunters supported the antler point restrictions on buck harvest implemented for the UP (Table 12), and about 56% of the hunters that preferred to hunt in the UP supported the antler point restrictions. Statewide support for the antler point restrictions was about the same in 2010 and 2011.

Statewide, about 42% of hunters supported the antler point restrictions on buck harvest implemented for the DMU 487 (Table 13), and about 45% of the hunters that preferred to hunt in the northeast LP supported the antler point restrictions. Statewide support for the antler point restrictions in DMU 487 increased significantly between 2010 and 2011.

About 118,573 hunters used a crossbow during the archery season, and they harvested about 54,902 deer with the crossbow (Tables 14-16). The number of archers using a crossbow increased 31% from 2010, and harvest of deer by archers using a crossbow increased 43%. About 39% of these archers using a crossbow in 2011 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 DNR-issued crossbow permit. About $52 \pm 1\%$ of the archers using a crossbow during the archery season in 2011 had obtained the required crossbow stamp in 2011. However, $68 \pm 1\%$ of the archers using a

crossbow during the archery season in 2011 had obtained a crossbow stamp during at least one year during 2009-2011.

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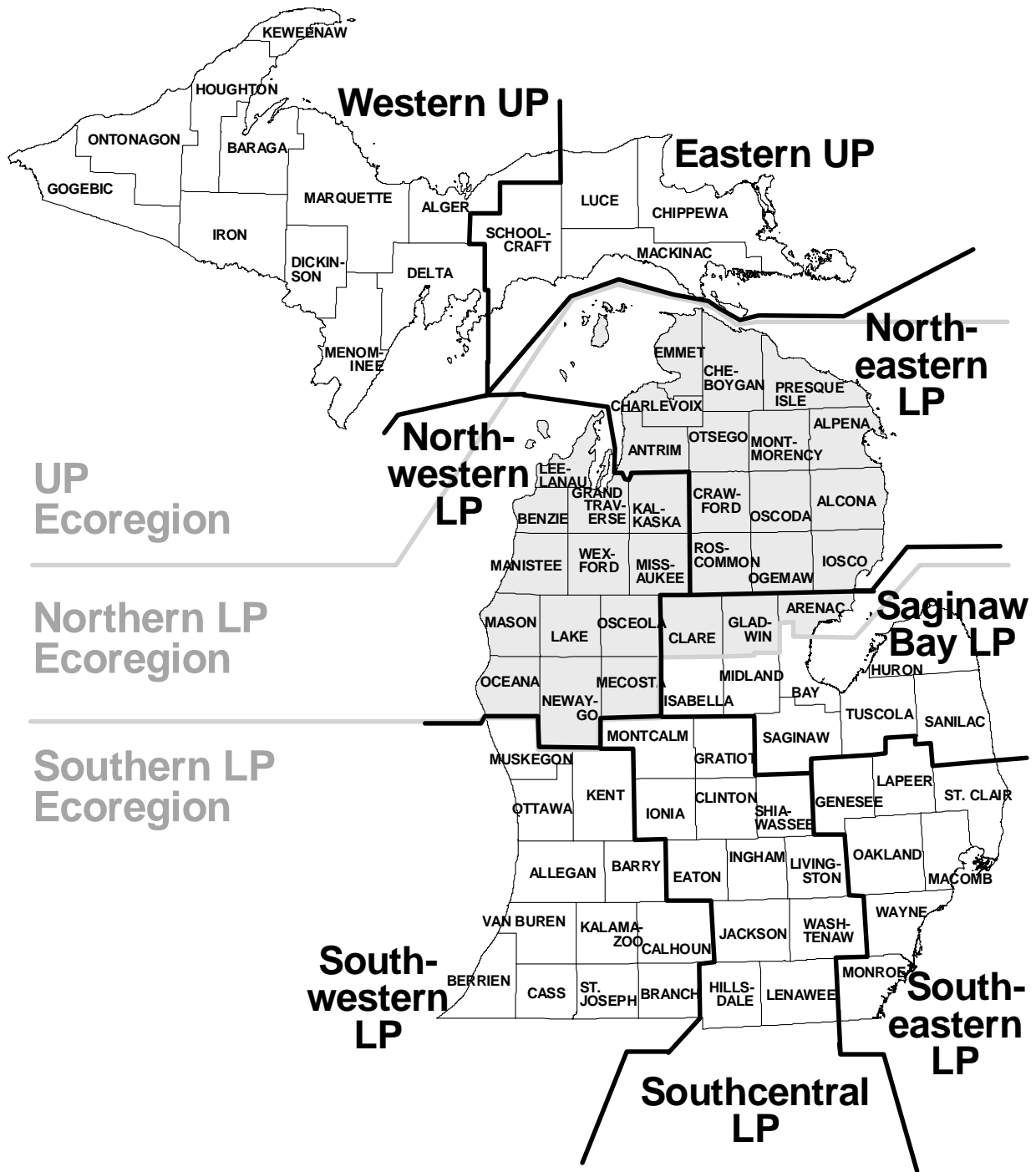


Figure 1. Areas used to summarize deer harvest in Michigan for the 2011 hunting seasons.

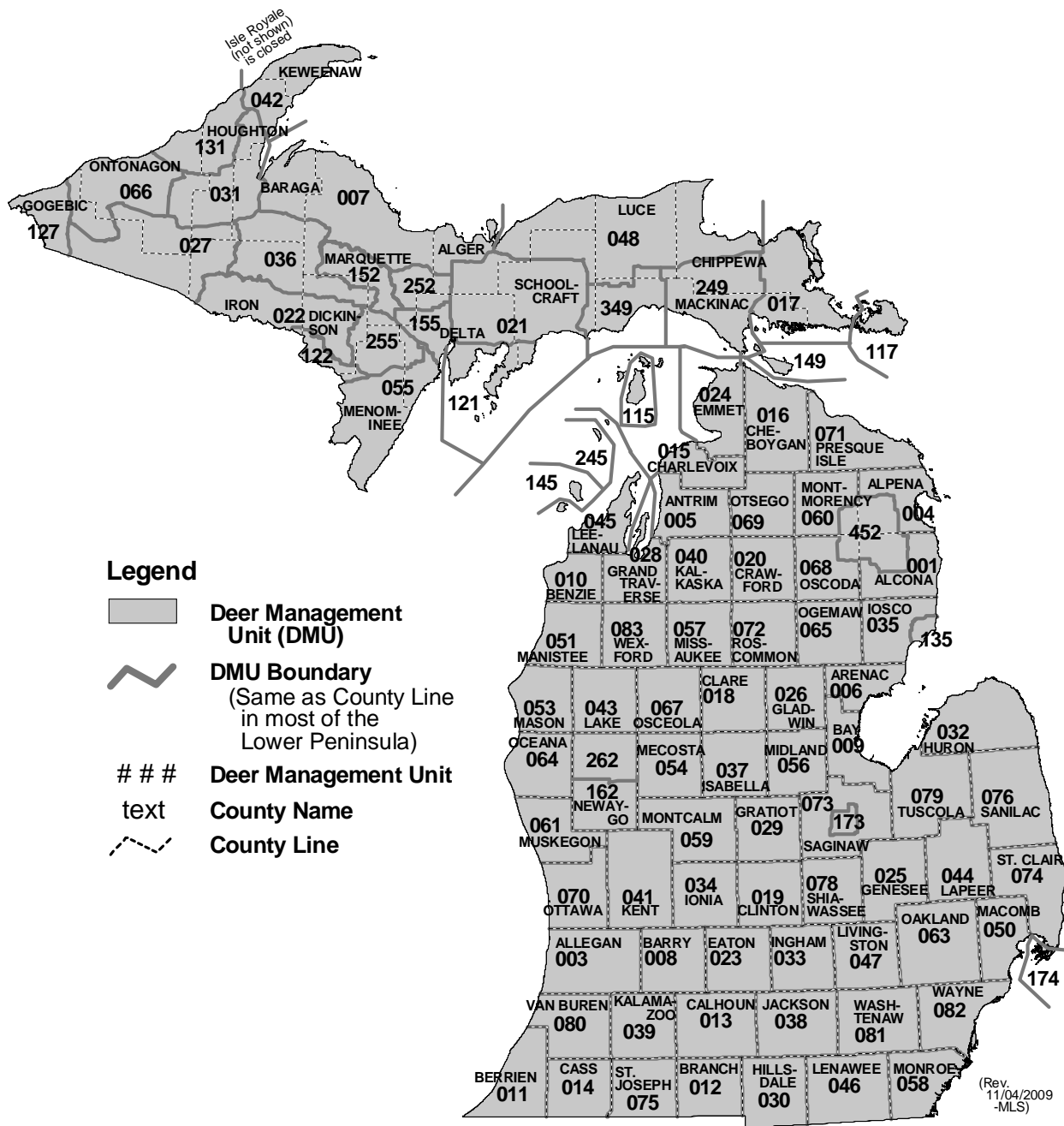


Figure 2. Deer Management Units in Michigan for the 2010 hunting seasons.

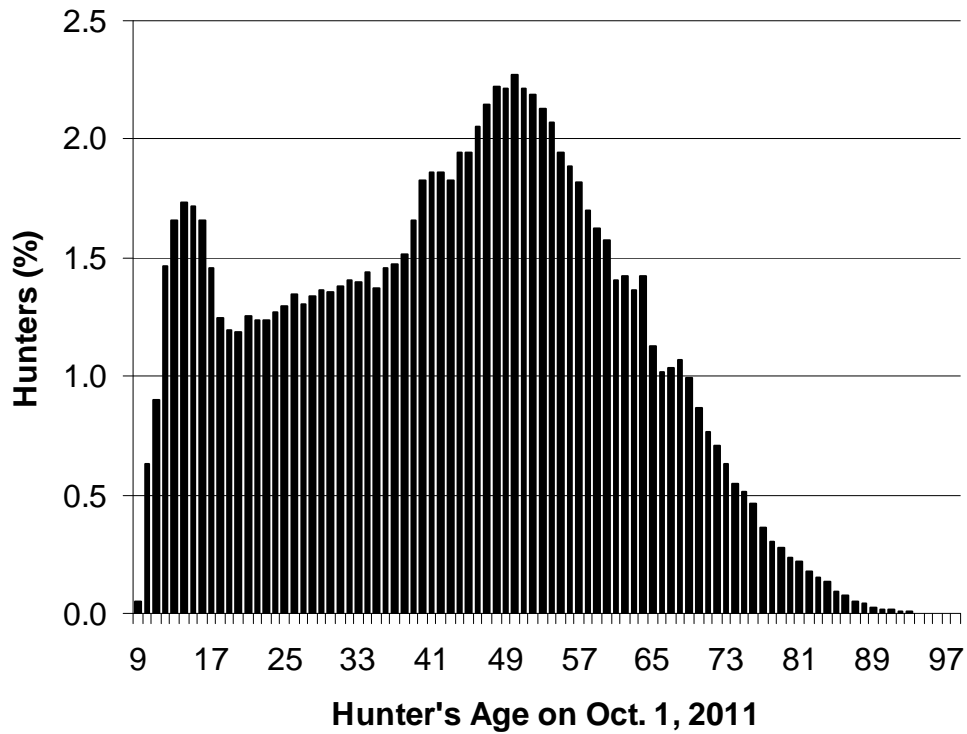


Figure 3. Age of people that purchased a deer hunting license in Michigan for the 2011 hunting seasons ($\bar{x} = 43$ years).

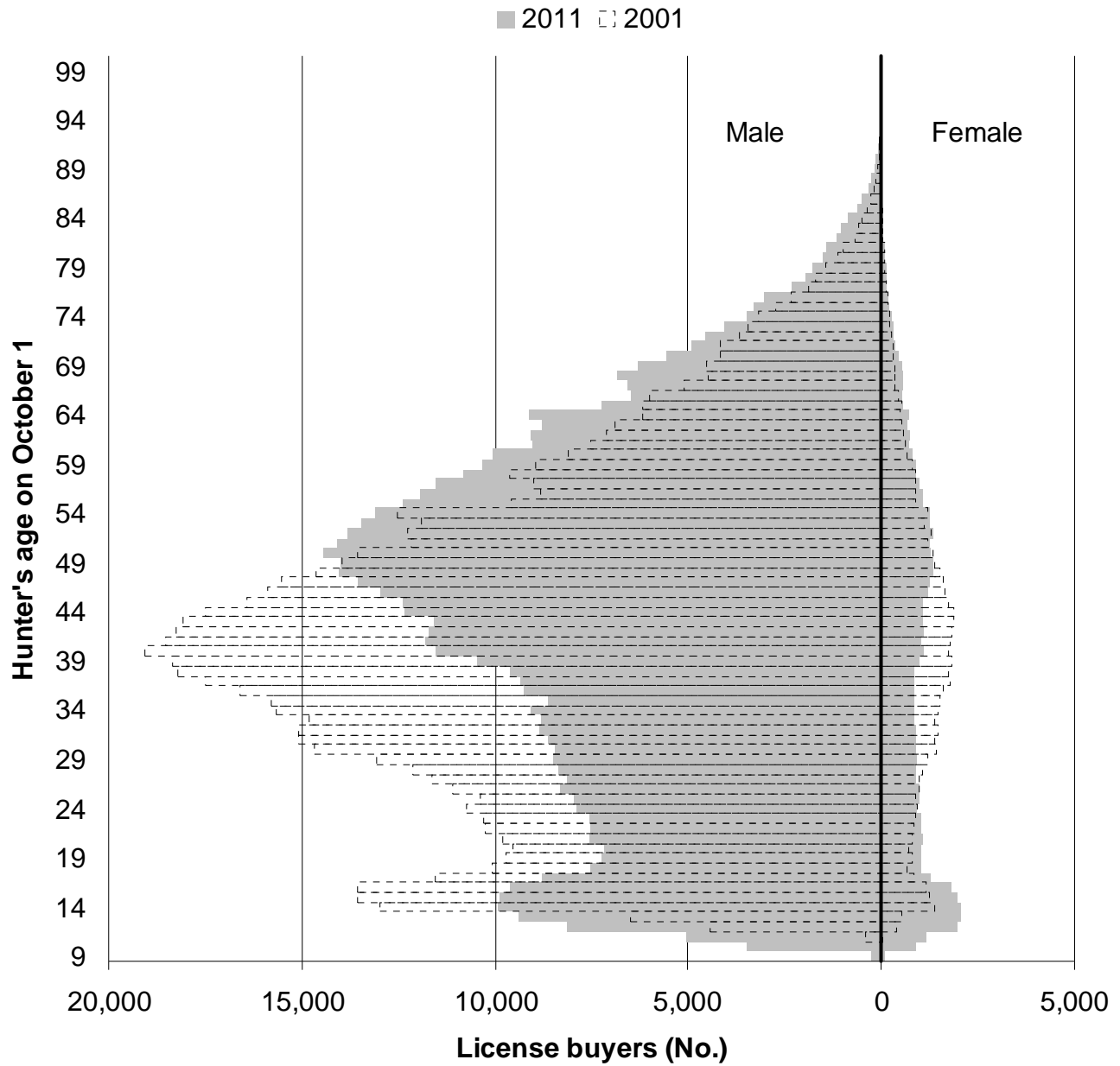


Figure 4. Number of deer hunting license buyers in Michigan by age and sex during 2001 and 2011 hunting seasons. Deer hunting licenses were purchased by 801,436 people in 2001 and 691,218 people in 2011.

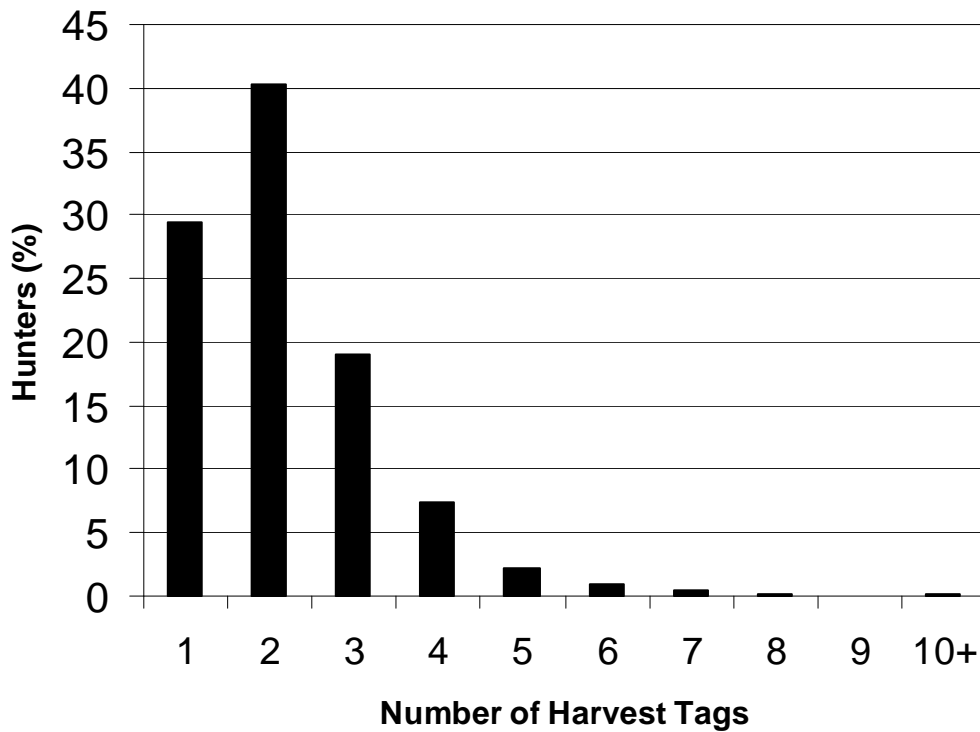


Figure 5. Number of harvest tags (all license and tag types) issued per person for hunting deer in Michigan during the 2011 hunting seasons ($\bar{x} = 2.2$ tags). Licenses were purchased by 691,218 people.

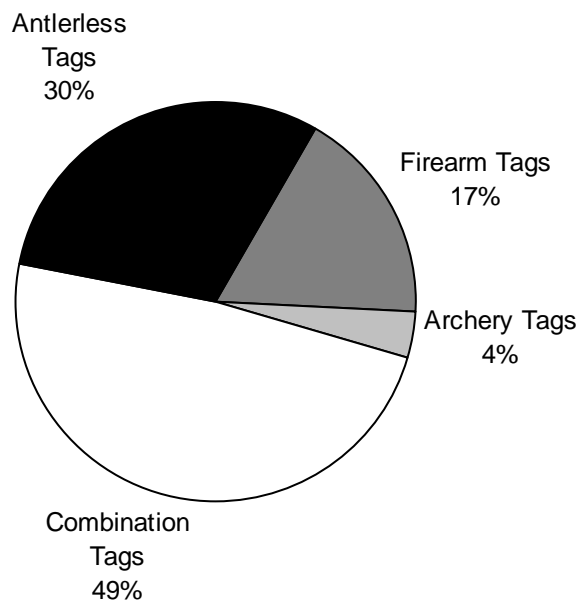


Figure 6. Types of harvest tags issued for deer hunting in Michigan during the 2011 hunting seasons.

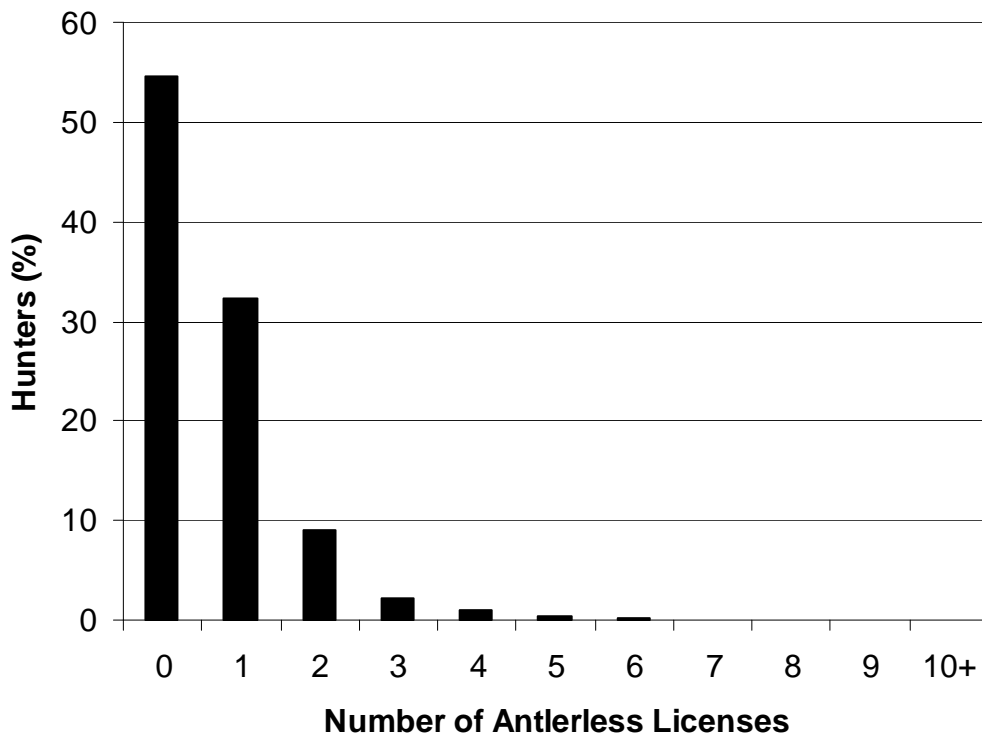


Figure 7. Percentage of deer hunting license buyers (all license types) purchasing an antlerless license in Michigan, 2011. Antlerless licenses were purchased by 314,122 of 691,218 people (45%) buying deer hunting licenses.

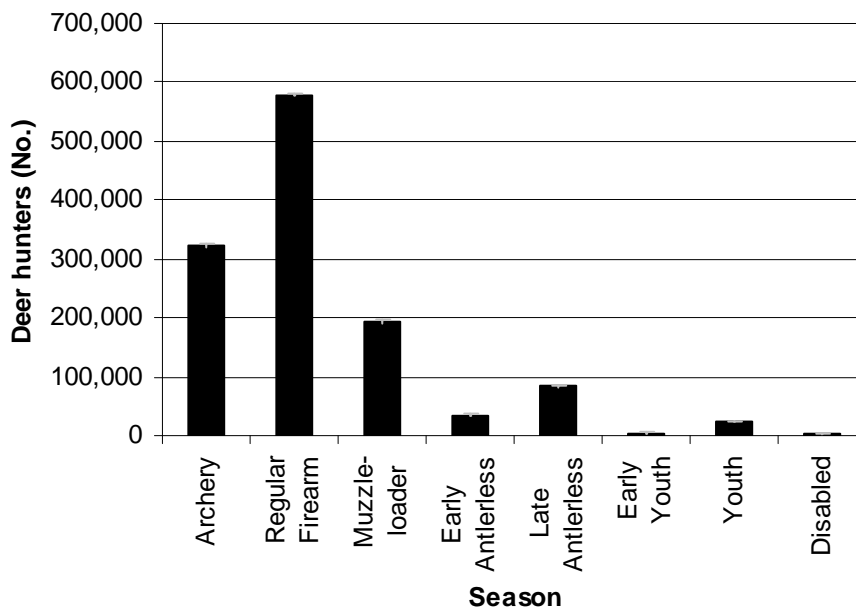


Figure 8. Number of people hunting deer in Michigan during the 2011 hunting seasons. Error bars represent the 95% CLs.

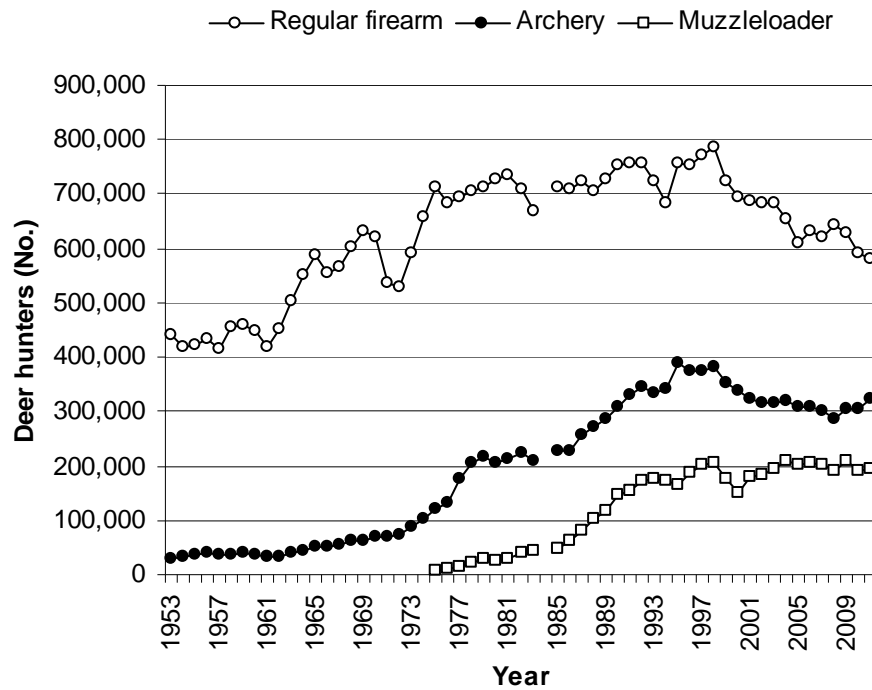


Figure 9. Number of people hunting deer in Michigan during the regular firearm, archery, and muzzleloader seasons, 1953-2011.

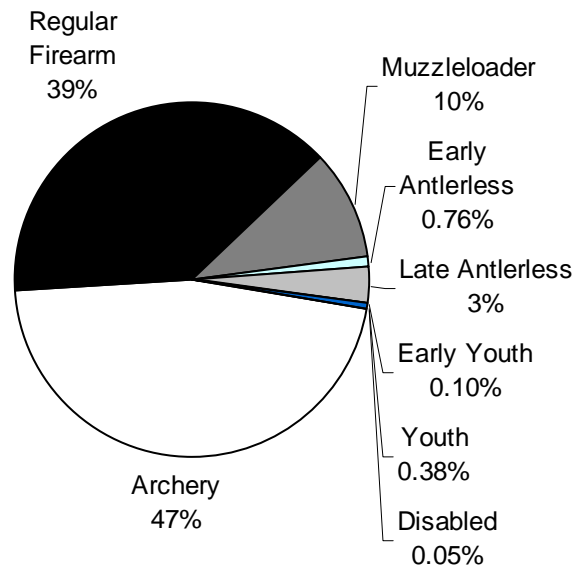


Figure 10. Distribution of hunting effort among deer hunting seasons in Michigan, 2011.

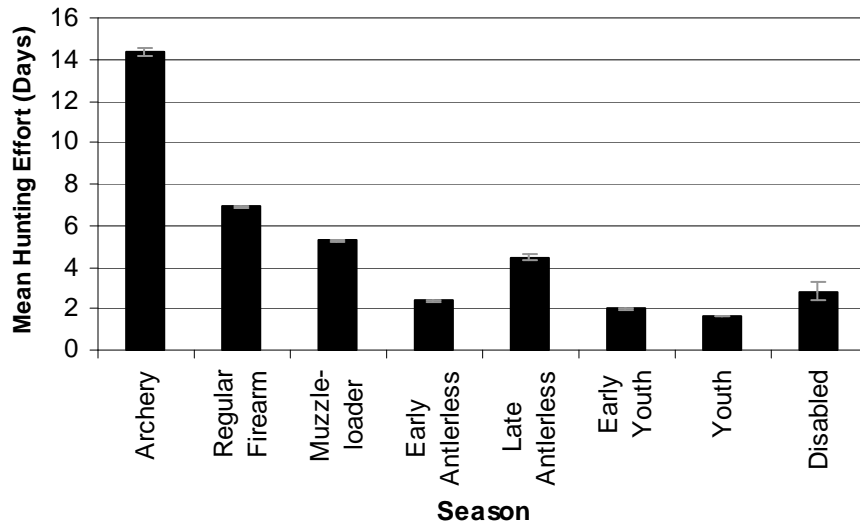


Figure 11. Mean number of days per hunter spent hunting deer in Michigan during the 2011 hunting seasons. Error bars represent the 95% CLs.

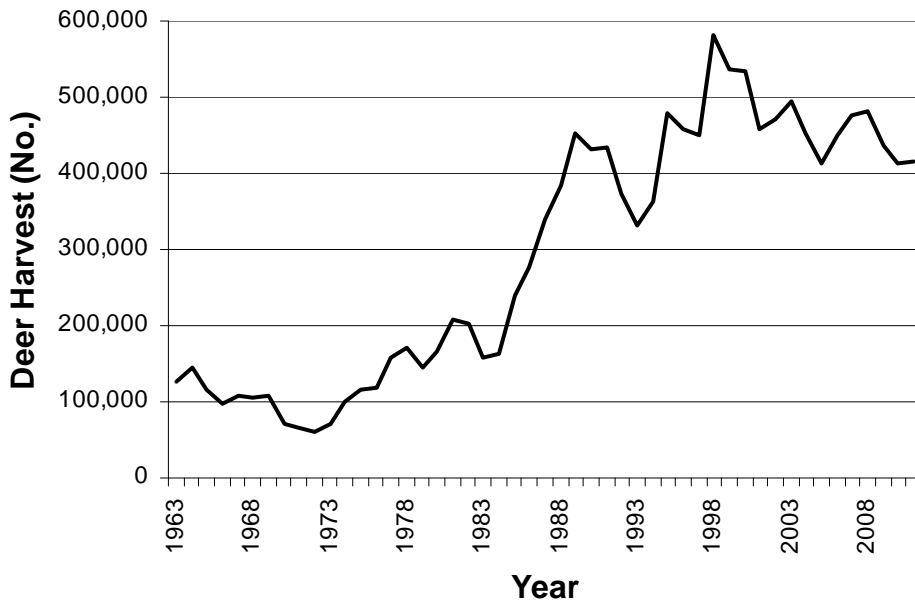


Figure 12. Number of deer harvested in Michigan's hunting seasons, 1963-2011. Harvest from all seasons and for all deer sexes was combined.

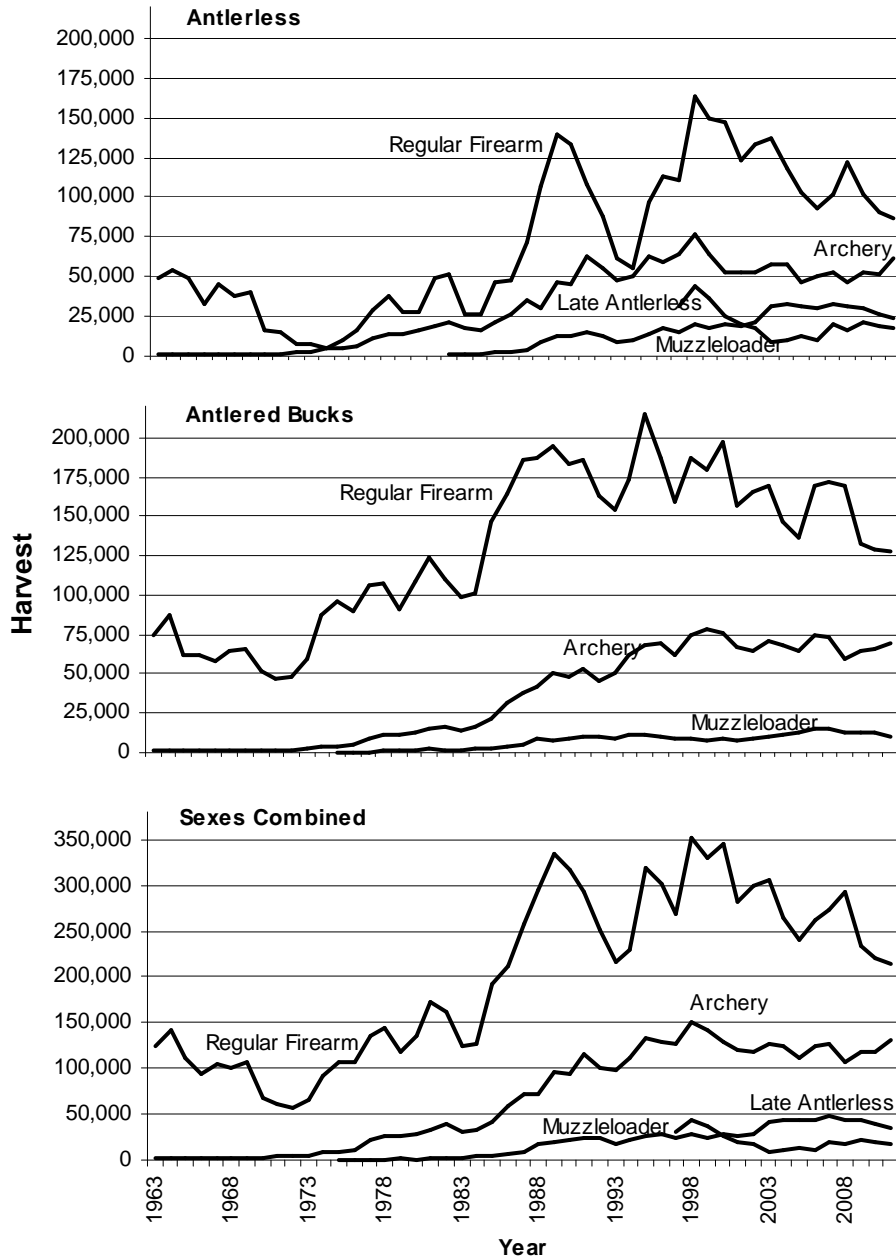


Figure 13. Number of deer harvested in Michigan's hunting seasons, 1963-2011. Harvests for early antlerless, youth, and special disabled hunter seasons were not shown.

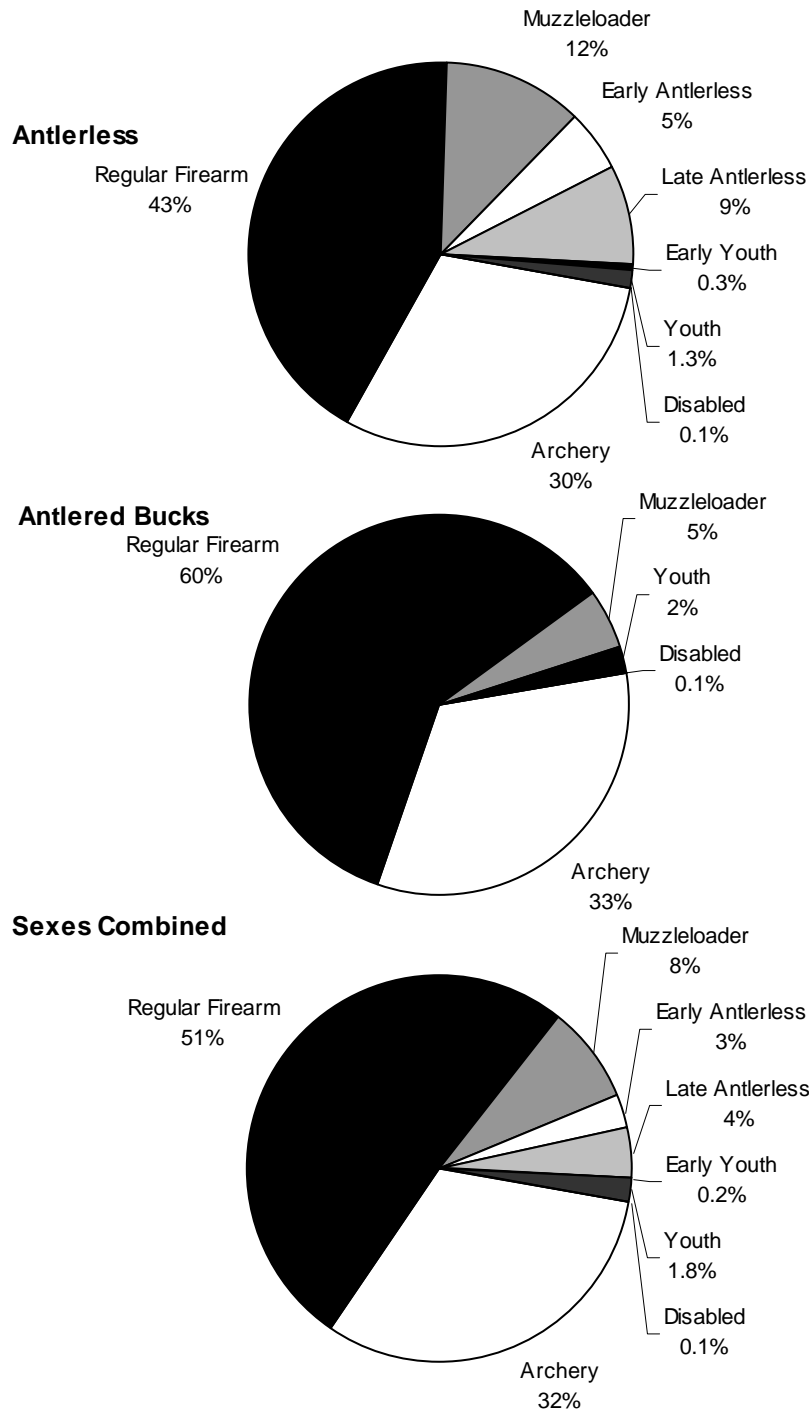


Figure 14. Distribution of harvest among deer hunting seasons in Michigan, 2011. Antlered deer had antlers at least 3 inches in length; antlerless deer included deer without antlers and deer with antlers less than 3 inches in length.

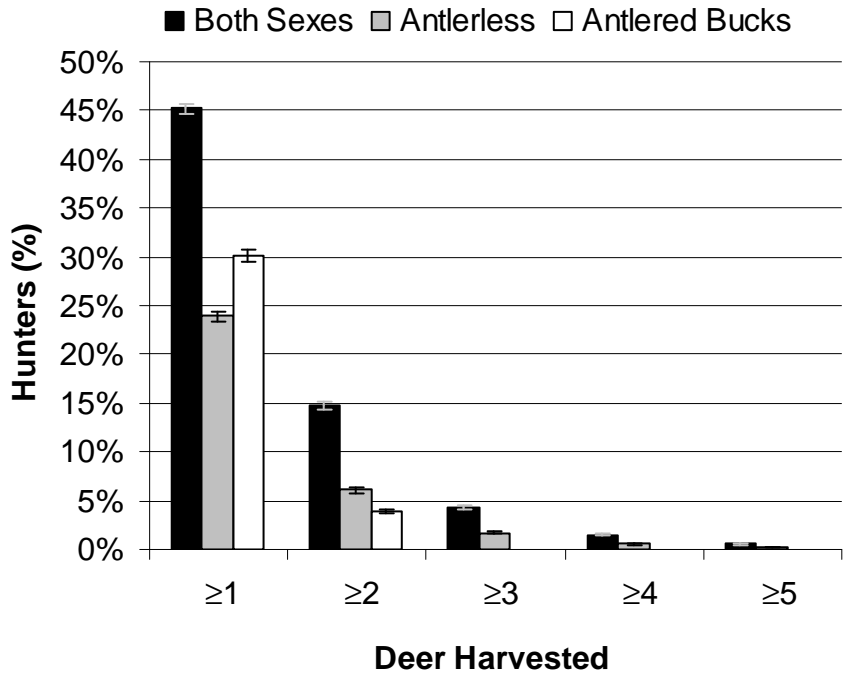


Figure 15. Percentage of hunters harvesting a deer in Michigan, 2011. Error bars represent the 95% CLs.

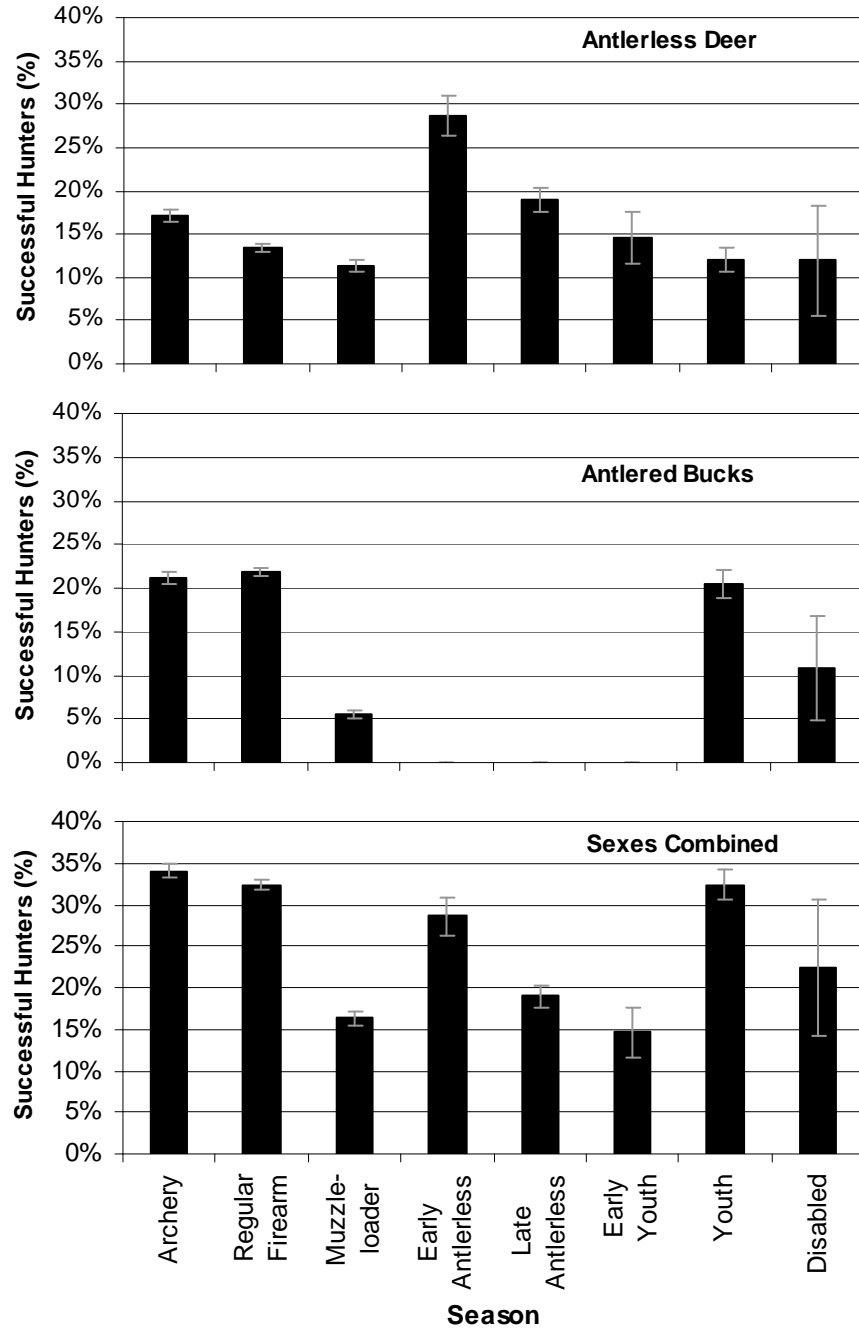


Figure 16. Percentage of hunters harvesting a deer in Michigan's deer hunting seasons, 2011. Error bars represent the 95% CLs. Antlered deer had at least one antler at least 3 inches in length; antlerless deer included deer without antlers and deer with antlers less than 3 inches in length.

Table 1. Kind of deer that could be taken during the 2011 Michigan deer hunting seasons for each combination of season and hunting license.

Type of license (harvest tag) or permit	Season	Kind of deer that could be harvested ^a
Archery License	Archery seasons	Antlerless or antlered deer ^b
Firearm License	Regular Firearm, or Muzzleloader seasons	Antlered deer statewide and antlerless deer in DMU 487 ^b
Firearm License	Youth and 100% disabled veteran hunt ^c	Antlerless or antlered deer
Combination License ^d (Regular harvest tag)	Archery season	Antlerless or antlered deer
Combination License ^d (Regular harvest tag)	Regular Firearm, or Muzzleloader seasons	Antlered deer statewide and antlerless deer in DMU 487
Combination License ^d (Regular harvest tag)	Youth and 100% disabled veteran hunt	Antlerless or antlered deer
Combination License ^d (Restricted harvest tag)	Archery seasons	Antlerless deer or a deer that has at least 1 antler with 4 or more antler points, 1 or more inches in length
Combination License ^d (Restricted harvest tag)	Regular Firearm, Youth, or Muzzleloader seasons	A deer that has at least 1 antler with 4 or more antler points (1 or more inches in length) or an antlerless deer in DMU 487
Combination License ^d (Restricted harvest tag)	Youth and 100% disabled veteran hunt	Antlerless or antlered deer which has at least 1 antler with 4 or more antler points 1 or more inches in length
Antlerless License ^e	All seasons	Antlerless deer only
Deer Management Assistance (DMA) permit ^f	All seasons	Antlerless deer only
Managed Deer Hunt permit ^g	Specified season	Antlerless deer only

^aAntlered deer had antlers at least 3 inches in length; antlerless deer included deer without antlers and deer with antlers less than 3 inches in length. Hunters could harvest a maximum of 2 antlered deer per year (all seasons combined).

^bIf a person took 2 antlered deer during all seasons combined, one of the antlered deer must have had at least 1 antler with 4 or more antler points, each point being 1 or more inches in length.

^cAll youths 10 and 11 years of age were restricted to archery-only hunting. Hunters could harvest only 1 deer in the youth and 100% disabled veterans season.

^dCombination licenses included two harvest tags (i.e., regular and restricted harvest tags).

^eAlthough antlerless licenses were only valid for taking an antlerless deer, a person with a valid antlerless deer hunting license that killed a male deer with antlers less than 3 inches in length could choose to tag the male deer with any deer hunting license (firearm, archery or either combination license).

^fPermits issued to landowners in areas where the number of antlerless licenses was insufficient to meet the objective of specific landowners (i.e., controlling disease or the deer population). To use these permits, the hunter must also have purchased a firearm, archery, combination, or antlerless deer license for the season in which they were hunting.

^gPermits for special hunts on designated public lands (e.g., some state parks, game areas, and federal property). These permits valid only during specific dates, which varied among areas. Permits issued to applicants using a lottery (i.e., random selection). To use these permits, the hunter must also have purchased a valid deer hunting license.

Table 2. Number of Michigan deer licenses purchased and harvest tags issued, 2009-2011.

Licenses or Harvest Tags	Number Purchased or Issued			Change Between 2010 and 2011 (%)
	2009	2010	2011	
Firearm Licenses				
Resident	237,282	217,816	196,470	-9.8
Non-resident	13,170	12,753	12,571	-1.4
Senior	35,568	36,606	36,729	0.3
Junior	NA	NA	18,175	
Military	1,015	926	1,001	8.1
Subtotal	287,035	268,101	264,946	-1.2
Archery Licenses				
Resident	39,246	40,803	41,804	2.5
Non-resident	2,869	3,070	3,022	-1.6
Junior	3,807	4,477	4,224	-5.7
Senior	4,578	5,366	6,148	14.6
Military	266	312	361	15.7
Subtotal	50,766	54,028	55,559	2.8
Combination Licenses^a				
Resident	287,564	281,091	280,744	-0.1
Non-resident	1,861	1,952	2,060	5.5
Junior	48,247	46,632	43,293	-7.2
Senior	39,037	39,332	41,511	5.5
Military	1,669	1,583	1,727	9.1
Subtotal	378,378	370,590	369,335	-0.3
Antlerless Licenses				
Resident	489,302	463,947	445,018	-4.1
Non-resident	2,584	2,154	3,150	46.2
Junior	4,554	3,319	3,117	-6.1
Military	2,181	2,537	2,493	-1.7
Pure Michigan Hunt	NA	3	3	0.0
Deer Management Assistance	10,679	7,771	8,219	5.8
Managed Deer Hunt	245	296	343	15.9
Subtotal	509,545	480,027	462,343	-3.7
Total Licenses Sold	1,225,724	1,172,746	1,152,183	-1.8
Harvest Tags Issued				
Firearm	287,035	268,101	264,946	-1.2
Archery	50,766	54,028	55,559	2.8
Combination	756,756	741,180	738,670	-0.3
Antlerless	509,545	480,027	462,343	-3.7
Total Harvest Tags	1,604,102	1,543,336	1,521,518	-1.4

^aCombination licenses included two harvest tags. Other license types had one harvest tag.

Table 3. Number of deer hunters and hunting effort in Michigan by hunting season, 2010-2011.

Season and Area	Number of hunters ^a				Hunting effort (days)			
	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)
Archery								
West UP	23,402	24,126	1,500	3.1	268,558	275,824	22,685	2.7
East UP	7,016	6,645	805	-5.3	70,463	60,164	9,731	-14.6
NE LP	43,231	45,317	2,031	4.8	457,286	486,639	30,948	6.4
NW LP	57,036	61,131	2,318	7.2	679,204	733,623	38,183	8.0
Sag. Bay	54,560	56,259	2,232	3.1	692,155	684,153	37,094	-1.2
SW LP	56,155	59,279	2,272	5.6	798,703	818,849	41,615	2.5
SC LP	64,357	68,234	2,412	6.0	880,054	921,631	44,539	4.7
SE LP	35,727	35,922	1,812	0.5	468,768	453,457	31,506	-3.3
UP	30,176	30,465	2,639	1.0	339,020	335,988	24,684	-0.9
NLP	115,397	122,505	3,807	6.2	1,351,133	1,426,806	53,086	5.6
SLP	185,686	192,769	3,688	3.8	2,625,037	2,671,546	75,377	1.8
Statewide ^c	306,686	321,869	4,037	5.0*	4,315,190	4,434,340	95,526	2.8
Regular Firearm								
West UP	70,546	66,491	2,372	-5.7	507,909	463,416	20,348	-8.8*
East UP	21,787	19,683	1,368	-9.7	144,467	128,860	10,700	-10.8
NE LP	106,424	102,419	2,908	-3.8	641,583	610,367	22,143	-4.9
NW LP	109,975	106,545	2,934	-3.1	650,035	630,940	22,400	-2.9
Sag. Bay	93,549	93,192	2,783	-0.4	548,000	555,182	21,249	1.3
SW LP	91,277	86,944	2,668	-4.7	592,335	558,953	21,948	-5.6
SC LP	103,931	101,672	2,829	-2.2	647,840	612,411	22,448	-5.5
SE LP	40,864	39,712	1,894	-2.8	234,329	222,727	13,265	-5.0
UP	91,870	85,737	1,677	-6.7*	652,376	592,275	22,990	-9.2*
NLP	242,339	235,652	3,109	-2.8*	1,465,758	1,418,821	33,718	-3.2
SLP	291,516	283,746	3,539	-2.7*	1,848,364	1,771,759	38,318	-4.1
Statewide ^c	593,074	578,855	2,846	-2.4*	3,966,498	3,782,855	56,177	-4.6*

^aExcluded people that did not hunt during the season.

^b95% confidence limit for the 2011 estimate.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one area.

*P<0.005.

Table 3 (continued). Number of deer hunters and hunting effort in Michigan by hunting season, 2010-2011.

Season and Area	Number of hunters ^a				Hunting effort (days)			
	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)
Muzzleloader								
West UP	15,266	15,123	1,205	-0.9	77,398	73,929	6,837	-4.5
East UP	5,719	5,116	707	-10.6	28,795	24,190	3,850	-16.0
NE LP	21,769	22,249	1,456	2.2	95,313	94,526	7,244	-0.8
NW LP	22,830	24,954	1,539	9.3	100,784	102,291	7,553	1.5
Sag. Bay	32,859	33,114	1,750	0.8	143,955	150,397	9,822	4.5
SW LP	39,408	39,845	1,895	1.1	211,919	212,044	12,573	0.1
SC LP	41,717	42,899	1,953	2.8	210,414	213,086	12,247	1.3
SE LP	19,275	18,813	1,331	-2.4	90,495	90,181	8,018	-0.3
UP	20,826	20,156	1,383	-3.2	106,193	98,118	7,847	-7.6
NLP	53,106	55,620	2,240	4.7	232,171	233,084	11,394	0.4
SLP	121,225	122,772	3,001	1.3	620,710	629,441	21,178	1.4
Statewide ^c	189,557	194,186	3,624	2.4	959,075	960,643	25,382	0.2
Early Antlerless								
West UP	0	0	0		0	0	0	
East UP	0	0	0		0	0	0	
NE LP	2,708	3,195	549	18.0	6,574	7,379	1,483	12.3
NW LP	1,791	2,216	456	23.7	4,270	4,434	1,105	3.8
Sag. Bay	5,754	6,298	763	9.5	13,296	12,589	1,833	-5.3
SW LP	6,659	8,494	886	27.5*	14,274	18,115	2,283	26.9
SC LP	8,295	9,294	922	12.0	18,835	19,944	2,285	5.9
SE LP	4,230	5,116	693	20.9	9,039	10,935	1,736	21.0
UP	0	0	0		0	0	0	
NLP	4,724	5,642	726	19.4	11,576	12,401	1,890	7.1
SLP	24,568	28,622	1,569	16.5*	54,714	60,996	4,081	11.5
Statewide ^c	29,721	34,957	726	17.6*	66,289	73,397	4,533	10.7

^aExcluded people that did not hunt during the season.

^b95% confidence limit for the 2011 estimate.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one area.

*P<0.005.

Table 3 (continued). Number of deer hunters and hunting effort in Michigan by hunting season, 2010-2011.

Season and Area	Number of hunters ^a				Hunting effort (days)			
	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)
Late Antlerless								
West UP	0	0	0		0	0	0	
East UP	0	0	0		0	0	0	
NE LP	4,223	5,460	726	29.3	16,775	20,367	3,441	21.4
NW LP	3,513	4,890	680	39.2*	13,738	18,520	3,336	34.8
Sag. Bay	11,160	14,445	1,157	29.4*	37,986	53,750	5,508	41.5*
SW LP	19,528	23,841	1,468	22.1*	80,831	96,023	7,558	18.8*
SC LP	21,470	26,275	1,537	22.4*	81,672	107,648	7,986	31.8*
SE LP	7,251	8,977	918	23.8	25,755	36,269	4,829	40.8*
UP	0	0	0		0	0	0	
NLP	8,143	10,675	1,003	31.1*	31,789	40,043	4,845	26.0
SLP	57,942	71,877	2,349	24.0*	224,968	292,535	13,193	30.0*
Statewide ^c	66,744	83,744	2,488	25.5*	256,757	332,578	14,179	29.5*
Early Youth								
West UP	0	0	0		0	0	0	
East UP	0	0	0		0	0	0	
NE LP	0	0	0		0	0	0	
NW LP	286	335	114	16.9	522	602	237	15.3
Sag. Bay	1,037	1,076	201	3.8	2,220	2,049	428	-7.7
SW LP	1,457	1,372	227	-5.8	2,743	2,768	496	0.9
SC LP	1,570	1,645	247	4.8	2,864	3,125	522	9.1
SE LP	355	458	133	29.2	755	792	255	4.8
UP	0	0	0		0	0	0	
NLP	286	335	114	16.9	522	602	237	15.3
SLP	4,408	4,508	393	2.3	8,582	8,733	875	1.8
Statewide ^c	4,749	5,065	413	6.6	9,104	9,335	285	2.5

^aExcluded people that did not hunt during the season.

^b95% confidence limit for the 2011 estimate.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one area.

*P<0.005.

Table 3 (continued). Number of deer hunters and hunting effort in Michigan by hunting season, 2010-2011.

Season and Area	Number of hunters ^a				Hunting effort (days)			
	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)
Youth								
West UP	1,428	1,692	250	18.5	2,300	2,677	421	16.4
East UP	276	359	117	29.9	447	552	191	23.5
NE LP	2,673	2,713	313	1.5	4,540	4,555	567	0.3
NW LP	4,969	4,727	400	-4.9	8,201	7,534	713	-8.1
Sag. Bay	4,372	4,796	404	9.7	6,961	7,679	720	10.3
SW LP	3,464	3,005	328	-13.3	5,380	4,647	558	-13.6
SC LP	4,208	4,072	376	-3.2	6,722	6,012	625	-10.6
SE LP	1,736	2,055	275	18.4	2,647	3,185	463	20.4
UP	1,705	2,051	274	20.3	2,747	3,229	462	17.5
NLP	8,778	8,967	516	2.1	14,665	14,479	995	-1.3
SLP	12,533	12,267	568	-2.1	19,784	19,133	1,129	-3.3
Statewide ^c	23,071	23,597	591	2.3	37,196	36,841	1,579	-1.0
Disabled hunts								
West UP	158	108	78	-31.7	571	246	262	-57.0
East UP	142	11	5	-92.5*	241	21	10	-91.4
NE LP	379	300	158	-20.8	1,301	597	383	-54.1
NW LP	253	396	177	56.4	722	856	440	18.6
Sag. Bay	262	454	197	73.2	720	1,094	701	51.9
SW LP	245	242	131	-1.1	599	673	424	12.3
SC LP	394	248	140	-37.0	963	620	522	-35.6
SE LP	157	235	140	49.7	339	280	175	-17.4
UP	300	118	78	-60.5	812	266	263	-67.2
NLP	676	806	254	19.2	2,115	1,843	787	-12.9
SLP	1,013	1,040	289	2.6	2,529	2,276	835	-10.0
Statewide ^c	2,107	2,045	403	-2.9	5,456	4,386	1,195	-19.6

^aExcluded people that did not hunt during the season.

^b95% confidence limit for the 2011 estimate.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one area.

*P<0.005.

Table 3 (continued). Number of deer hunters and hunting effort in Michigan by hunting season, 2010-2011.

Season and Area	Number of hunters ^a				Hunting effort (days)			
	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)	2010	2011	95% CL ^b	Change from 2010 to 2011 (%)
All Seasons								
West UP	79,297	76,166	2,512	-3.9	856,638	815,984	39,861	-4.7
East UP	25,457	22,631	1,460	-11.1	244,378	213,712	19,125	-12.5
NE LP	118,859	117,877	3,071	-0.8	1,223,283	1,224,343	50,374	0.1
NW LP	128,681	124,714	3,114	-3.1	1,457,517	1,499,273	58,499	2.9
Sag. Bay	111,603	111,615	2,989	0.0	1,445,339	1,466,876	60,347	1.5
SW LP	109,218	106,591	2,900	-2.4	1,706,794	1,711,858	69,678	0.3
SC LP	127,469	124,958	3,065	-2.0	1,849,391	1,884,311	72,480	1.9
SE LP	57,401	56,700	2,227	-1.2	832,224	818,018	48,007	-1.7
UP	103,729	97,971	2,782	-5.6*	1,101,016	1,029,697	44,211	-6.5
NLP	274,687	271,567	3,903	-1.1	3,109,714	3,148,624	83,460	1.3
SLP	353,269	346,439	3,708	-1.9	5,404,835	5,456,054	122,675	0.9
Statewide ^c	656,501	648,127	1,731	-1.3*	9,615,565	9,634,375	155,117	0.2

^aExcluded people that did not hunt during the season.

^b95% confidence limit for the 2011 estimate.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one area.

*P<0.005.

Table 4. Mean number of days hunters spent hunting deer (\bar{x} hunting effort) in Michigan by hunting season, 2011.^a

Area	Season							
	Archery		Regular Firearm		Muzzleloader		Early Antlerless	
	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b
West UP	11.5	0.6	7.2	0.2	5.0	0.2	0.0	0.0
East UP	9.3	1.0	6.8	0.3	4.9	0.4	0.0	0.0
NE LP	11.0	0.5	6.1	0.1	4.4	0.2	2.6	0.2
NW LP	12.4	0.4	6.1	0.1	4.4	0.2	2.3	0.3
Sag. Bay	12.6	0.5	6.2	0.1	4.7	0.2	2.3	0.2
SW LP	14.3	0.5	6.8	0.1	5.6	0.2	2.4	0.1
SC LP	14.0	0.4	6.4	0.1	5.2	0.2	2.3	0.1
SE LP	13.1	0.6	5.9	0.2	5.1	0.3	2.4	0.2
UP	11.2	0.5	7.1	0.1	5.0	0.2	0.0	0.0
NLP	12.0	0.3	6.2	0.1	4.4	0.1	2.5	0.2
SLP	14.3	0.3	6.6	0.1	5.4	0.1	2.3	0.1
Statewide	14.4	0.2	6.9	0.1	5.3	0.1	2.4	0.1

^aExcluded people that did not hunt during the season.

^b95% confidence limit.

Table 4 (Continued). Mean number of days hunters spent hunting deer (\bar{x} hunting effort) in Michigan by hunting season, 2011.^a

Area	Season									
	Late Antlerless		Early Youth		Youth		Disabled Hunts		All Seasons	
	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b	\bar{x} days	95% CL ^b
West UP	0.0	0.0	0.0	0.0	1.6	0.1	3.1	1.2	11.0	0.4
East UP	0.0	0.0	0.0	0.0	1.6	0.2	2.7	0.7	9.7	0.6
NE LP	4.0	0.4	0.0	0.0	1.7	0.0	2.7	0.6	10.7	0.3
NW LP	4.2	0.4	1.9	0.4	1.6	0.0	2.7	0.7	12.4	0.4
Sag. Bay	4.1	0.2	2.0	0.2	1.6	0.0	3.3	1.2	13.6	0.4
SW LP	4.5	0.2	2.0	0.1	1.6	0.1	2.8	0.8	16.7	0.5
SC LP	4.5	0.2	2.0	0.1	1.5	0.0	2.8	1.7	15.7	0.4
SE LP	4.5	0.3	1.7	0.2	1.6	0.1	1.5	0.3	15.0	0.6
UP	0.0	0.0	0.0	0.0	1.6	0.1	3.1	1.2	10.8	0.3
NLP	4.1	0.3	1.9	0.4	1.7	0.0	3.1	0.8	11.9	0.2
SLP	4.5	0.1	2.0	0.1	1.6	0.0	2.6	0.6	16.4	0.3
Statewide	4.5	0.1	2.0	0.1	1.6	0.0	2.8	0.4	15.6	0.2

^aExcluded people that did not hunt during the season.

^b95% confidence limit.

Table 5. Number of deer harvested in Michigan, 2009-2011.

Season or permit	Type of deer	2009	2010	2011	Change from 2010 to 2011 (%)
Season					
Archery	Antlerless	53,053	51,309	61,466	19.8*
	Antlered bucks	64,580	65,871	70,148	6.5
	Sexes combined	117,633	117,180	131,615	12.3*
Regular firearm	Antlerless	101,234	90,927	86,697	-4.7
	Antlered bucks	132,822	129,376	127,373	-1.5
	Sexes combined	234,056	220,303	214,070	-2.8
Muzzleloader	Antlerless	30,595	26,627	23,838	-10.5
	Antlered bucks	12,252	12,348	10,418	-15.6
	Sexes combined	42,847	38,975	34,256	-12.1*
Early antlerless	Antlerless	11,545	8,423	10,892	29.3*
Late antlerless	Antlerless	21,325	18,957	17,345	-8.5
Early youth	Antlerless	0	720	713	-1.0
Youth	Antlerless	2,993	2,748	2,736	-0.4
	Antlered bucks	5,283	4,557	4,634	1.7
	Sexes combined	8,275	7,305	7,370	0.9
Disabled hunts	Antlerless	171	248	242	-2.2
	Antlered bucks	184	189	217	15.1
	Sexes combined	354	436	460	5.3
Special permits ^a	Antlerless	8,195	5,551	5,293	-4.6
Grand Total	Antlerless	229,111	205,509	209,223	1.8
	Antlered bucks	215,120	212,341	212,791	0.2
	Sexes combined	444,231	417,850	422,014	1.0

^aIncludes deer harvested with DMA permits. These permits could be used during any deer hunting season.

*P<0.005.

Table 6. Number of deer harvested in Michigan by hunting season, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)
Archery												
West UP	4,312	5,418	797	25.6	3,478	4,215	646	21.2	7,789	9,630	1,066	23.6
East UP	1,060	862	292	-18.7	507	580	234	14.5	1,567	1,442	388	-8.0
NE LP	4,820	6,476	833	34.3*	3,644	6,464	793	77.4*	8,464	12,938	1,222	52.9*
NW LP	7,939	10,297	1,067	29.7*	9,010	11,083	1,057	23.0*	16,948	21,380	1,626	26.1*
Sag. Bay	7,968	9,682	1,077	21.5	12,330	11,911	1,111	-3.4	20,299	21,594	1,699	6.4
SW LP	9,145	10,222	1,119	11.8	12,470	12,240	1,137	-1.8	21,616	22,463	1,753	3.9
SC LP	10,656	12,986	1,302	21.9	17,006	17,302	1,358	1.7	27,663	30,291	2,085	9.5
SE LP	5,408	5,523	787	2.1	7,426	6,353	812	-14.5	12,834	11,876	1,241	-7.5
UP	5,372	6,280	849	16.9	3,985	4,795	687	20.3	9,356	11,072	1,134	18.3
NLP	15,153	20,197	1,487	33.3*	15,485	20,809	1,441	34.4*	30,636	41,003	2,236	33.8*
SLP	30,784	34,989	2,085	13.7*	46,402	44,544	2,167	-4.0	77,188	79,540	3,314	3.0
Statewide	51,309	61,466	2,710	19.8*	65,871	70,148	2,700	6.5	117,180	131,615	4,169	12.3*
Regular Firearm												
West UP	4,865	5,265	834	8.2	21,127	19,541	1,380	-7.5	25,993	24,802	1,696	-4.6
East UP	52	0	0	-100.0	3,353	3,322	565	-0.9	3,405	3,321	565	-2.5
NE LP	10,861	12,437	1,195	14.5	16,317	20,259	1,416	24.2*	27,179	32,695	1,948	20.3*
NW LP	12,650	12,038	1,134	-4.8	18,583	20,626	1,430	11.0	31,234	32,662	1,952	4.6
Sag. Bay	17,564	18,091	1,491	3.0	20,226	21,147	1,450	4.6	37,790	39,239	2,275	3.8
SW LP	15,941	14,217	1,314	-10.8	18,696	15,102	1,246	-19.2*	34,636	29,321	1,953	-15.3*
SC LP	24,484	19,818	1,562	-19.1*	24,581	21,499	1,491	-12.5	49,063	41,319	2,362	-15.8*
SE LP	4,511	4,832	740	7.1	6,493	5,878	772	-9.5	11,004	10,711	1,146	-2.7
UP	4,916	5,265	834	7.1	24,479	22,863	1,491	-6.6	29,398	28,122	1,787	-4.3
NLP	28,082	29,863	1,823	6.3	39,871	46,848	2,158	17.5*	67,953	76,709	3,000	12.9*
SLP	57,929	51,569	2,517	-11.0*	65,026	57,663	2,423	-11.3*	122,952	109,239	3,807	-11.2*
Statewide	90,927	86,697	3,227	-4.7	129,376	127,373	3,584	-1.5	220,303	214,070	5,183	-2.8

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 6 (continued). Number of deer harvested in Michigan by hunting season, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011
Muzzleloader												
West UP	1,014	1,415	386	39.6	1,270	1,670	397	31.5	2,287	3,084	567	34.9
East UP	52	2	2	-97.0	419	214	144	-49.0	473	215	144	-54.4
NE LP	2,387	1,837	437	-23.0	941	883	295	-6.2	3,328	2,721	536	-18.3
NW LP	2,376	2,039	477	-14.2	764	862	285	12.8	3,139	2,901	564	-7.6
Sag. Bay	5,439	5,003	731	-8.0	2,062	1,436	367	-30.4	7,499	6,439	845	-14.1
SW LP	6,234	4,776	750	-23.4	2,980	1,928	428	-35.3*	9,214	6,704	889	-27.2*
SC LP	6,825	6,913	934	1.3	2,675	2,380	478	-11.0	9,499	9,294	1,096	-2.2
SE LP	2,300	1,853	464	-19.4	1,237	1,045	313	-15.5	3,538	2,898	582	-18.1
UP	1,066	1,417	386	32.9	1,689	1,884	422	11.5	2,759	3,299	585	19.6
NLP	6,030	5,022	739	-16.7	2,015	1,958	434	-2.8	8,042	6,980	869	-13.2
SLP	19,532	17,400	1,434	-10.9	8,644	6,576	790	-23.9*	28,174	23,977	1,702	-14.9*
Statewide	26,627	23,838	1,666	-10.5	12,348	10,418	1,001	-15.6	38,975	34,256	2,007	-12.1*
Early Antlerless												
West UP	0	0	0		0	0	0	0	0	0	0	
East UP	0	0	0		0	0	0	0	0	0	0	
NE LP	727	900	315	23.9	0	0	0	0	727	900	315	23.9
NW LP	793	617	255	-22.1	0	0	0	0	793	617	255	-22.1
Sag. Bay	1,969	2,473	531	25.6	0	0	0	0	1,969	2,473	531	25.6
SW LP	1,480	2,316	501	56.4	0	0	0	0	1,480	2,316	501	56.4
SC LP	2,531	3,019	587	19.3	0	0	0	0	2,531	3,019	587	19.3
SE LP	923	1,566	422	69.7	0	0	0	0	923	1,566	422	69.7
UP	0	0	0		0	0	0	0	0	0	0	
NLP	1,619	1,600	415	-1.2	0	0	0	0	1,619	1,600	415	-1.2
SLP	6,804	9,292	1,024	36.6	0	0	0	0	6,804	9,292	1,024	36.6*
Statewide	8,423	10,892	1,115	29.3*	0	0	0	0	8,423	10,892	1,115	29.3*

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 6 (continued). Number of deer harvested in Michigan by hunting season, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011
Late Antlerless												
West UP	0	0	0		0	0	0		0	0	0	
East UP	0	0	0		0	0	0		0	0	0	
NE LP	1,157	1,177	377	1.7	0	0	0		1,157	1,177	377	1.7
NW LP	970	1,064	351	9.6	0	0	0		970	1,064	351	9.6
Sag. Bay	3,710	3,608	683	-2.7	0	0	0		3,710	3,608	683	-2.7
SW LP	4,746	3,384	598	-28.7*	0	0	0		4,746	3,384	598	-28.7*
SC LP	6,845	6,450	906	-5.8	0	0	0		6,845	6,450	906	-5.8
SE LP	1,528	1,662	441	8.8	0	0	0		1,528	1,662	441	8.8
UP	0	0	0		0	0	0		0	0	0	
NLP	2,217	2,294	520	3.5	0	0	0		2,217	2,294	520	3.5
SLP	16,740	15,051	1,354	-10.1	0	0	0		16,740	15,051	1,354	-10.1
Statewide	18,957	17,345	1,456	-8.5	0	0	0		18,957	17,345	1,456	-8.5
Early Youth												
West UP	0	0	0		0	0	0		0	0	0	
East UP	0	0	0		0	0	0		0	0	0	
NE LP	0	0	0		0	0	0		0	0	0	
NW LP	65	55	45	-15.0	0	0	0		65	55	45	-15.0
Sag. Bay	153	134	69	-12.5	0	0	0		153	134	69	-12.5
SW LP	218	189	83	-13.3	0	0	0		218	189	83	-13.3
SC LP	251	268	98	6.7	0	0	0		251	268	98	6.7
SE LP	33	66	49	103.9	0	0	0		33	66	49	103.9
UP	0	0	0		0	0	0		0	0	0	
NLP	65	55	45	-15.0	0	0	0		65	55	45	-15.0
SLP	655	657	154	0.4	0	0	0		655	657	154	0.4
Statewide	720	713	163	-1.0	0	0	0		720	713	163	-1.0

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 6 (continued). Number of deer harvested in Michigan by hunting season, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011
Youth												
West UP	182	303	106	66.3	367	425	125	15.9	549	729	164	32.7
East UP	43	75	53	75.0	43	66	49	52.9	86	141	72	64.0
NE LP	397	399	122	0.5	582	467	132	-19.7	979	867	179	-11.5
NW LP	805	841	177	4.6	936	923	185	-1.4	1,741	1,766	256	1.4
Sag. Bay	431	516	139	19.6	1,109	1,127	204	1.6	1,540	1,642	247	6.6
SW LP	333	97	60	-71.0*	421	413	124	-1.7	753	509	137	-32.4
SC LP	386	311	108	-19.5	883	889	181	0.6	1,269	1,199	211	-5.6
SE LP	172	194	85	13.1	215	324	110	50.5	387	518	139	33.9
UP	225	378	119	68.0	410	491	135	19.8	635	870	179	36.9
NLP	1,363	1,563	241	14.6	1,830	1,661	248	-9.2	3,194	3,227	346	1.0
SLP	1,159	795	173	-31.5	2,317	2,482	303	7.1	3,476	3,274	349	-5.8
Statewide	2,748	2,736	320	-0.4	4,557	4,634	416	1.7	7,305	7,370	524	0.9
Disabled Hunts												
West UP	9	8	4	-13.8	3	9	4	180.6	12	17	7	35.3
East UP	26	0	0	-100.0	27	0	0	-100.0	52	0	0	-100.0
NE LP	3	32	50	960.0	28	8	4	-72.5	31	40	51	29.1
NW LP	38	43	51	13.4	41	91	88	123.7	78	134	102	71.2
Sag. Bay	41	59	71	44.0	9	38	51	310.1	51	97	88	91.9
SW LP	65	9	6	-85.6	31	2	2	-95.0	97	11	6	-88.8
SC LP	65	35	51	-45.1	47	40	51	-14.0	112	76	73	-32.0
SE LP	2	56	72	3618.4	3	30	51	1042.1	4	86	88	2001.8
UP	35	8	4	-77.6	30	9	4	-70.6	64	17	7	-74.3
NLP	50	75	71	50.0	72	106	88	47.9	121	181	114	49.7
SLP	163	160	113	-2.1	87	102	89	17.3	251	262	144	4.3
Statewide	248	242	134	-2.2	189	217	125	15.1	436	460	183	5.3

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 6 (continued). Number of deer harvested in Michigan by hunting season, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)
All Seasons												
West UP	10,392	12,417	1,289	19.5	26,240	25,852	1,638	-1.5	36,644	38,277	2,241	4.5
East UP	1,235	939	297	-24.0	4,347	4,181	638	-3.8	5,584	5,122	726	-8.3
NE LP	20,360	23,270	1,761	14.3	21,509	28,079	1,706	30.5*	41,869	51,351	2,685	22.6*
NW LP	25,652	27,008	1,829	5.3	29,331	33,587	1,896	14.5*	54,985	60,599	2,941	10.2
Sag. Bay	37,270	39,566	2,513	6.2	35,739	35,660	1,966	-0.2	73,006	75,223	3,631	3.0
SW LP	38,149	35,200	2,385	-7.7	34,602	29,687	1,854	-14.2*	72,746	64,882	3,438	-10.8*
SC LP	52,027	49,789	2,987	-4.3	45,195	42,113	2,209	-6.8	97,214	91,896	4,279	-5.5
SE LP	14,874	15,742	1,574	5.8	15,378	13,631	1,233	-11.4	30,252	29,372	2,269	-2.9
UP	11,627	13,355	1,323	14.9	30,587	30,033	1,758	-1.8	42,229	43,399	2,355	2.8
NLP	54,606	60,703	2,801	11.2*	59,265	71,383	2,746	20.4*	113,872	132,091	4,348	16.0*
SLP	133,725	129,872	4,691	-2.9	122,489	111,374	3,559	-9.1*	256,198	241,231	6,739	-5.8*
Statewide	199,958	203,930	5,641	2.0	4,845	212,791	4,843	0.2	412,299	416,721	8,387	1.1

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 7. Number of deer harvested on public and private lands during all seasons combined in Michigan by management region, 2010-2011.^a

Season and Area	Antlerless				Antlered Bucks				Sexes Combined			
	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)	2010 Harvest	2011 Harvest	95% CL ^b	Change from 2010 to 2011 (%)
Public Lands												
West UP	2,818	3,097	572	9.9	8,467	8,456	931	-0.1	11,288	11,556	1,134	2.4
East UP	437	259	154	-40.7	1,258	1,409	362	11.9	1,695	1,668	400	-1.6
NE LP	4,317	5,236	776	21.3	5,137	6,697	831	30.4*	9,453	11,931	1,205	26.2*
NW LP	1,722	2,683	512	55.8*	4,980	6,393	814	28.4	6,704	9,078	998	35.4*
Sag. Bay	3,896	4,213	712	8.1	3,958	3,721	611	-6.0	7,852	7,932	1,019	1.0
SW LP	2,161	2,203	492	2.0	2,091	2,455	510	17.4	4,250	4,658	746	9.6
SC LP	3,376	2,801	563	-17.0	3,293	3,051	567	-7.4	6,667	5,851	879	-12.2
SE LP	1,122	1,452	408	29.5	1,201	963	298	-19.8	2,323	2,415	549	3.9
UP	3,255	3,356	592	3.1	9,725	9,865	999	1.4	12,983	13,225	1,203	1.9
NLP	7,414	9,513	1,012	28.3*	11,486	14,363	1,216	25.0*	18,900	23,876	1,655	26.3*
SLP	9,180	9,076	1,036	-1.1	9,174	8,917	958	-2.8	18,350	17,989	1,542	-2.0
Statewide	19,849	21,946	1,574	10.6	30,385	33,144	1,854	9.1	50,233	55,089	2,578	9.7
Private Lands												
West UP	7,573	9,331	1,133	23.2	17,770	17,423	1,336	-2.0	25,351	26,761	1,899	5.6
East UP	797	681	254	-14.6	3,089	2,777	521	-10.1	3,888	3,460	602	-11.0
NE LP	16,042	18,052	1,567	12.5	16,371	21,397	1,483	30.7	32,413	39,452	2,365	21.7*
NW LP	23,930	24,323	1,739	1.6	24,351	27,201	1,702	11.7	48,281	51,527	2,720	6.7
Sag. Bay	33,374	35,352	2,403	5.9	31,782	31,929	1,861	0.5	65,154	67,278	3,455	3.3
SW LP	35,989	32,986	2,323	-8.3	32,513	27,218	1,777	-16.3*	68,499	60,200	3,323	-12.1*
SC LP	48,652	46,970	2,922	-3.5	41,904	39,041	2,130	-6.8	90,550	86,006	4,152	-5.0
SE LP	13,752	14,288	1,502	3.9	14,177	12,661	1,190	-10.7	27,930	26,948	2,173	-3.5
UP	8,370	10,012	1,161	19.6	20,859	20,200	1,434	-3.2	29,239	30,220	1,992	3.4
NLP	47,192	51,209	2,589	8.5	47,778	57,040	2,449	19.4*	94,969	108,255	3,960	14.0*
SLP	124,547	120,763	4,555	-3.0	113,320	102,407	3,416	-9.6*	237,857	223,157	6,499	-6.2*
Statewide	180,109	181,985	5,384	1.0	181,957	179,647	4,453	-1.3	362,066	361,632	7,890	-0.1

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^b95 confidence limit for the 2011 estimate.

*P<0.005.

Table 8. Percentage of deer hunters harvesting deer in Michigan during all seasons, 2011.^a

Sex and Area	Number of deer harvested									
	≥1 deer		≥2 deer		≥3 deer		≥4 deer		≥5 deer	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Antlerless										
West UP	13.5	1.2	2.7	0.6	0.4	0.2	0.1	0.1	0.0	0.1
East UP	4.1	1.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
NE LP	16.6	1.1	2.8	0.5	0.6	0.2	0.2	0.1	0.0	0.1
NW LP	18.6	1.1	3.0	0.5	0.5	0.2	0.1	0.1	0.0	0.0
Sag. Bay	26.7	1.3	6.9	0.7	2.0	0.4	0.5	0.2	0.2	0.1
SW LP	25.0	1.3	6.4	0.7	1.8	0.4	0.4	0.2	0.2	0.1
SC LP	28.5	1.2	8.1	0.8	2.6	0.4	1.0	0.3	0.4	0.2
SE LP	21.5	1.7	4.6	0.9	1.5	0.5	0.6	0.3	0.2	0.2
UP	11.5	1.0	2.2	0.5	0.3	0.2	0.1	0.1	0.0	0.1
NLP	18.8	0.7	3.3	0.3	0.6	0.1	0.2	0.1	0.0	0.0
SLP	27.3	0.7	7.5	0.4	2.3	0.3	0.8	0.1	0.3	0.1
Statewide	23.9	0.5	6.0	0.3	1.7	0.2	0.6	0.1	0.2	0.1
Antlered bucks^c										
West UP	32.6	1.7	2.4	0.5						
East UP	18.7	2.6	0.4	0.4						
NE LP	22.8	1.2	1.8	0.4						
NW LP	25.3	1.2	2.5	0.4						
Sag. Bay	29.5	1.3	3.4	0.5						
SW LP	24.9	1.3	3.7	0.6						
SC LP	29.9	1.3	4.8	0.6						
SE LP	22.1	1.7	2.7	0.7						
UP	29.6	1.4	1.9	0.4						
NLP	24.8	0.8	2.2	0.3						
SLP	28.7	0.8	4.4	0.3						
Statewide	30.2	0.6	3.9	0.2						

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

^cThe season bag limit for antlered deer was two.

Table 8 (continued). Percentage of deer hunters harvesting deer in Michigan during all seasons, 2011.^a

Sex and Area	Number of deer harvested									
	≥1 deer		≥2 deer		≥3 deer		≥4 deer		≥5 deer	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Sexes Combined										
West UP	41.9	1.8	7.9	1.0	1.5	0.4	0.2	0.2	0.0	0.0
East UP	22.0	2.7	1.3	0.7	0.0	0.0	0.0	0.0	0.1	0.1
NE LP	34.8	1.4	8.0	0.8	1.3	0.3	0.5	0.2	0.1	0.1
NW LP	37.7	1.3	10.1	0.8	1.8	0.4	0.4	0.2	0.2	0.2
Sag. Bay	47.0	1.5	14.9	1.0	4.9	0.6	1.7	0.4	0.2	0.2
SW LP	41.6	1.5	14.2	1.0	4.3	0.6	1.6	0.4	0.3	0.3
SC LP	47.3	1.4	17.8	1.1	6.1	0.7	2.7	0.4	0.2	0.2
SE LP	36.8	2.0	11.1	1.3	3.4	0.8	1.4	0.5	0.0	0.0
UP	37.6	1.5	6.5	0.8	1.2	0.3	0.2	0.1	0.1	0.1
NLP	37.8	0.9	9.8	0.6	1.8	0.3	0.5	0.1	0.2	0.2
SLP	45.9	0.8	16.5	0.6	5.6	0.4	2.2	0.2	0.0	0.0
Statewide	45.2	0.6	14.7	0.4	4.3	0.2	1.5	0.1	0.6	0.1

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

^cThe season bag limit for antlered deer was two.

Table 9. Percentage of deer hunters harvesting at least one deer in Michigan by hunting season, 2011.^a

Sex and Area	Season											
	Archery		Regular Firearm		Muzzleloader		Early Antlerless		Late Antlerless		Early Youth	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Antlerless												
West UP	20.3	2.6	6.7	1.0	9.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0
East UP	12.7	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE LP	13.6	1.6	11.1	1.0	8.1	1.8	25.2	7.4	19.7	5.4	0.0	0.0
NW LP	15.8	1.5	10.7	0.9	7.7	1.7	26.0	9.0	19.5	5.6	16.6	12.7
Sag. Bay	15.3	1.5	17.1	1.2	14.5	1.9	35.3	5.9	22.2	3.4	12.5	6.3
SW LP	15.3	1.5	14.7	1.2	10.8	1.5	25.2	4.6	13.7	2.2	13.9	5.8
SC LP	16.2	1.4	17.1	1.2	14.3	1.7	28.9	4.6	21.8	2.5	16.4	5.7
SE LP	14.3	1.8	11.0	1.5	8.9	2.0	28.0	6.1	16.9	3.9	14.6	10.3
UP	18.9	2.2	5.2	0.7	6.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0
NLP	15.5	1.0	11.8	0.6	8.6	1.2	25.9	5.6	19.5	3.8	16.6	12.7
SLP	15.8	0.8	16.0	0.7	12.9	0.9	29.3	2.6	18.9	1.4	14.7	3.3
Statewide	17.1	0.7	13.5	0.4	11.4	0.7	28.6	2.4	18.9	1.3	14.6	3.1
Antlered Bucks												
West UP	17.5	2.4	29.5	1.8	11.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0
East UP	9.0	3.5	17.2	2.7	4.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0
NE LP	14.4	1.6	19.6	1.2	3.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0
NW LP	18.0	1.5	19.2	1.2	3.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Sag. Bay	20.6	1.7	22.4	1.3	4.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0
SW LP	19.9	1.6	16.9	1.3	5.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
SC LP	24.3	1.6	20.5	1.2	5.6	1.1	0.0	0.0	0.0	0.0	0.0	0.0
SE LP	17.2	2.0	14.6	1.8	5.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0
UP	15.8	2.1	26.8	1.5	9.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0
NLP	16.8	1.1	19.7	0.8	3.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
SLP	22.2	0.9	19.8	0.7	5.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Statewide	21.2	0.7	21.8	0.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

Table 9 (continued). Percentage of deer hunters harvesting at least one deer in Michigan by hunting season, 2011.^a

Sex and Area	Season											
	Archery		Regular Firearm		Muzzleloader		Early Antlerless		Late Antlerless		Early Youth	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Sexes combined												
West UP	35.7	3.1	34.3	1.8	19.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0
East UP	20.9	4.9	17.2	2.7	4.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0
NE LP	26.1	2.0	29.0	1.4	11.7	2.1	25.2	7.4	19.7	5.4	0.0	0.0
NW LP	30.7	1.8	27.5	1.3	11.1	2.0	26.0	9.0	19.5	5.6	16.6	12.7
Sag. Bay	32.0	1.9	35.7	1.5	18.4	2.1	35.3	5.9	22.2	3.4	12.5	6.3
SW LP	31.4	1.9	28.8	1.5	15.2	1.8	25.2	4.6	13.7	2.2	13.9	5.8
SC LP	35.3	1.8	33.7	1.5	18.9	1.9	28.9	4.6	21.8	2.5	16.4	5.7
SE LP	28.2	2.3	23.7	2.1	14.0	2.5	28.0	6.1	16.9	3.9	14.6	10.3
UP	32.8	2.7	30.6	1.6	16.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
NLP	29.5	1.3	29.2	0.9	12.0	1.4	25.9	5.6	19.5	3.8	16.6	12.7
SLP	33.4	1.1	32.3	0.9	17.6	1.1	29.3	2.6	18.9	1.4	14.7	3.3
Statewide	34.1	0.8	32.3	0.6	16.3	0.8	28.6	2.4	18.9	1.3	14.6	3.1

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

Table 9 (Continued). Percentage of deer hunters harvesting at least one deer in Michigan by hunting season, 2011.^a

Sex and Area	Season					
	Youth		Disabled Hunts		All Seasons	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Antlerless						
West UP	18.6	5.9	7.5	6.6	13.5	1.2
East UP	21.7	13.6	0.0	0.0	4.1	1.3
NE LP	15.2	4.3	11.0	16.4	16.6	1.1
NW LP	18.5	3.5	10.3	12.7	18.6	1.1
Sag. Bay	11.2	2.8	13.3	15.1	26.7	1.3
SW LP	3.3	2.0	2.7	2.1	25.0	1.3
SC LP	7.9	2.6	14.7	19.8	28.5	1.2
SE LP	9.8	4.1	24.6	26.9	21.5	1.7
UP	19.1	5.4	6.8	5.7	11.5	1.0
NLP	18.1	2.5	9.2	8.8	18.8	0.7
SLP	6.7	1.4	15.5	10.3	27.3	0.7
Statewide	12.0	1.3	12.0	6.4	23.9	0.5
Antlered Bucks						
West UP	25.9	6.6	8.4	7.1	32.6	1.7
East UP	18.9	12.8	0.0	0.0	18.7	2.6
NE LP	17.7	4.6	2.7	2.0	22.8	1.2
NW LP	20.1	3.6	23.8	19.8	25.3	1.2
Sag. Bay	24.2	3.9	8.4	11.3	29.5	1.3
SW LP	14.2	4.0	0.7	0.9	24.9	1.3
SC LP	22.5	4.1	16.2	19.8	29.9	1.3
SE LP	16.2	5.1	13.0	20.9	22.1	1.7
UP	24.7	5.9	7.6	6.1	29.6	1.4
NLP	19.1	2.6	13.5	10.6	24.8	0.8
SLP	20.8	2.3	10.0	8.4	28.7	0.8
Statewide	20.4	1.6	10.9	6.0	30.2	0.6

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

Table 9 (continued). Percentage of deer hunters harvesting at least one deer in Michigan by hunting season, 2011.^a

Sex and Area	Season					
	Youth		Disabled Hunts		All Seasons	
	Success	95% CL ^b	Success	95% CL ^b	Success	95% CL ^b
Sexes combined						
West UP	44.5	7.5	14.4	11.4	41.9	1.8
East UP	40.6	16.1	0.0	0.0	22.0	2.7
NE LP	33.0	5.6	13.6	16.5	34.8	1.4
NW LP	38.6	4.4	33.9	21.4	37.7	1.3
Sag. Bay	35.4	4.3	21.7	17.8	47.0	1.5
SW LP	17.5	4.3	3.3	2.5	41.6	1.5
SC LP	30.4	4.5	29.6	25.5	47.3	1.4
SE LP	26.0	6.0	37.6	29.6	36.8	2.0
UP	43.8	6.8	13.1	9.7	37.6	1.5
NLP	37.2	3.2	22.5	13.0	37.8	0.9
SLP	27.6	2.5	25.1	12.3	45.9	0.8
Statewide	32.4	1.9	22.5	8.2	45.2	0.6

^aExcluded people that did not hunt during the season and deer taken with DMA permits.

^b95 confidence limit.

Table 10. Level of satisfaction and dissatisfaction with the number of deer seen and number of antlered deer (bucks) seen among Michigan deer hunters, 2010-2011.

Criteria and area	Satisfied hunters (%) ^a				Dissatisfied hunters (%) ^b			
	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)
Number of deer seen								
West UP	29	39	2	10*	58	46	2	-12*
East UP	16	27	3	11*	73	61	4	-12*
NE LP	19	27	1	8*	69	59	2	-10*
NW LP	25	28	1	3*	61	59	1	-2
Sag. Bay	40	37	2	-2	46	48	2	2
SW LP	38	28	1	-10*	47	57	2	10*
SC LP	46	37	1	-9*	38	48	1	10*
SE LP	41	36	2	-5	41	46	2	5*
UP	26	36	2	10*	61	49	2	-12*
NLP	23	28	1	5*	65	59	1	-6*
SLP	43	35	1	-8*	41	49	1	8*
Statewide	33	33	1	-1	53	53	1	0
Number of antlered deer (bucks) seen								
West UP	21	24	2	3	66	61	2	-5*
East UP	9	16	3	7*	80	71	3	-9*
NE LP	13	17	1	4*	73	67	1	-6*
NW LP	16	18	1	2	69	67	1	-1
Sag. Bay	27	25	1	-2	55	58	2	2
SW LP	26	20	1	-6*	56	64	2	8*
SC LP	31	26	1	-5*	50	56	1	7*
SE LP	26	24	2	-2	55	57	2	3
UP	19	23	1	4*	69	63	2	-6*
NLP	15	18	1	3*	70	67	1	-3*
SLP	29	24	1	-5*	53	58	1	6*
Statewide	22	21	1	-1	61	62	1	1

^aIncluded hunters who were "very satisfied" or "somewhat satisfied."

^bIncluded hunters who were "somewhat dissatisfied" or "strongly dissatisfied."

^c95 confidence limit for the 2011 estimate.

*P<0.005.

Table 11. Level of satisfaction and dissatisfaction with overall deer hunting experience and number of deer harvested among Michigan deer hunters, 2010-2011.

Criteria and area	Satisfied hunters (%) ^a				Dissatisfied hunters (%) ^b			
	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)
Overall deer hunting experience								
West UP	43	49	2	6*	37	31	2	-6*
East UP	30	39	4	9*	50	41	4	-8*
NE LP	32	41	2	9*	47	38	2	-9*
NW LP	36	41	1	5*	42	37	1	-4*
Sag. Bay	48	47	2	-1	32	32	1	0
SW LP	47	40	2	-7*	31	38	2	7*
SC LP	52	48	1	-4*	26	30	1	5*
SE LP	48	47	2	-2	27	30	2	3
UP	40	47	2	6*	40	33	2	-7*
NLP	35	41	1	6*	44	37	1	-6*
SLP	50	46	1	-4*	28	33	1	5*
Statewide	43	44	1	1	36	35	1	-1
Number of deer harvested								
West UP	31	34	2	3	35	32	2	-4
East UP	17	22	3	5	51	46	4	-4
NE LP	21	26	1	6*	45	37	2	-7*
NW LP	24	28	1	4*	41	38	1	-4*
Sag. Bay	34	34	2	0	33	33	2	0
SW LP	32	27	1	-5*	34	39	2	5*
SC LP	36	35	1	-1	32	34	1	2
SE LP	30	29	2	-1	33	33	2	0
UP	28	32	2	4*	39	35	2	-4*
NLP	23	27	1	5*	43	37	1	-5*
SLP	34	32	1	-2*	32	35	1	3*
Statewide	29	30	1	1	37	36	1	-1*

^aIncluded hunters who were "very satisfied" or "somewhat satisfied."

^bIncluded hunters who were "somewhat dissatisfied" or "strongly dissatisfied."

^c95 confidence limit for the 2011 estimate.

*P<0.005.

Table 12. Level of support and opposition for the antler point restrictions in the Upper Peninsula among Michigan deer hunters, 2010-2011.

Preferred hunt area	Hunters supporting (%) ^a				Hunters opposing (%) ^b			
	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)	2010	2011	95% CL ^c	Difference from 2010 to 2011 (%)
West UP	59	57	2	-2	30	32	2	2
East UP	57	54	4	-4	33	37	4	4
NE LP	46	47	2	1	25	23	1	-2
NW LP	48	50	2	2	20	19	1	-1
Sag. Bay	47	50	2	2	21	19	1	-2
SW LP	51	52	2	1	16	14	1	-1
SC LP	51	53	1	2	17	16	1	-1
SE LP	53	53	2	0	18	18	2	-1
UP	59	56	2	-3	30	33	2	2
NLP	47	48	1	1	22	21	1	-1
SLP	51	52	1	2*	17	16	1	-1*
Statewide	50	51	1	1	21	20	0	-1

^aIncluded hunters who “strongly supported” or “supported” antler point restrictions in the UP.

^bIncluded hunters who “opposed” or “strongly opposed” antler point restrictions in the UP.

^c95 confidence limit for the 2011 estimate.

*P<0.005.

Table 13. Level of support and opposition for the antler point restrictions in DMU 487 among Michigan deer hunters, 2010-2011.^a

Preferred hunt area	Hunters supporting (%) ^b				Hunters opposing (%) ^c			
	2010	2011	95% CL ^d	Difference from 2010 to 2011 (%)	2010	2011	95% CL ^d	Difference from 2010 to 2011 (%)
West UP	36	35	2	-1	18	18	1	0
East UP	38	39	4	1	22	24	3	1
NE LP	42	45	2	3*	31	28	1	-3
NW LP	38	40	2	2	20	19	1	-1
Sag. Bay	39	41	2	2	22	20	1	-2
SW LP	39	41	2	2	14	14	1	0
SC LP	42	43	2	2	16	16	1	0
SE LP	45	47	2	2	19	18	2	-1
UP	36	36	2	-1	19	19	1	1
NLP	40	42	1	3*	25	23	1	-2
SLP	41	43	1	2*	17	16	1	-1
Statewide	40	42	1	2*	20	19	0	-1

^aNew antler point restrictions were adopted in 2010 for the taking of antlered deer (bucks) in DMU 487. Under this new 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 used on a buck with at least four points on one side. Hunters who chose not to purchase the combination tag were restricted to one buck (with no additional point restrictions) in the UP, all seasons combined, even if they purchased an archery and firearms license. In addition, hunters in DMU 487 could use a firearm license or one or both combination license tags for antlerless deer during the firearm or muzzleloader seasons. DMU 487 included Alcona, Alpena, Iosco, Montmorency, Oscoda, and Presque Isle counties.

^bGroup supporting restrictions included hunters reporting they “strongly supported” or “supported.”

^cGroup opposing restrictions included hunters reporting they “opposed” or “strongly opposed.”

^d95% confidence limit. Excluded people that did not hunt.

*P<0.005.

Table 14. Estimated proportion and number of archers that used a crossbow during 2011 archery season in Michigan, summarized by region.

Region	Archers using a crossbow during archery season			
	%	95% CL	Total	95% CL
UP	36.6	3.0	9,250	942
NLP	40.9	1.5	40,310	1,919
SLP	35.3	1.1	59,236	2,257
Unknown ^a	32.3	2.7	9,777	972
Statewide	36.8	0.8	118,573	3,078

^aRegion could not be determined when hunter did not report where they hunted or when hunter reported hunting in more than one region.

Table 15. Estimated hunter success of archers hunting with a crossbow during 2011 archery season in Michigan, summarized by type of deer and region.

Region	Antlerless		Antlered Bucks		Sexes Combined	
	% ^a	95% CL	% ^a	95% CL	% ^a	95% CL
UP	27.3	4.6	18.0	4.0	42.3	5.1
NLP	19.7	2.0	21.6	2.0	37.1	2.4
SLP	19.2	1.6	25.1	1.8	39.5	2.0
Unknown ^b	23.2	4.2	20.0	4.0	37.7	4.9
Statewide	20.3	1.2	22.9	1.2	38.8	1.4

^aPercentage of crossbow hunters harvesting at least one deer.

^bRegion could not be determined when hunter did not report where they hunted or when hunter reported hunting in more than one region.

Table 16. Estimated number of deer harvested by archers with a crossbow during 2011 archery season in Michigan, summarized by type of deer and region.

Region	Antlerless		Antlered Bucks		Sexes Combined	
	No.	95% CL	No.	95% CL	No.	95% CL
UP	2,666	542	1,610	389	4,276	704
NLP	8,502	984	8,840	953	17,342	1,492
SLP	13,145	1,305	15,526	1,281	28,670	1,995
Unknown ^a	2,587	572	2,027	465	4,613	809
Statewide	26,899	1,798	28,003	1,691	54,902	2,668

^aRegion could not be determined when hunter did not report where they hunted or when hunter reported hunting in more than one region.

Appendix A. Antlerless deer hunting license quotas, number of antlerless licenses sold, and number of hunters purchasing an antlerless license in Michigan during 2011, summarized by Deer Management Unit and license type (public and private lands).

DMU ^a	DMU Name	Public land			Private land		
		License quota	Licenses sold ^b	License buyers ^c	License quota	Licenses sold ^{b,c}	License buyers ^c
001	Alcona County ^d	5,000	2,786	2,328	0	0	0
003	Allegan County ^d	3,000	2,509	2,089	0	0	0
004	Alpena County ^d	3,000	582	498	0	0	0
005	Antrim County	0	0	0	5,000	4,270	3,033
006	Arenac County	500	407	405	7,600	4,916	3,777
007	Big Bay Unit	0	0	0	0	0	0
008	Barry County ^d	1,800	1,480	1,280	0	0	0
009	Bay County ^d	200	161	146	0	0	0
010	Benzie County	0	0	0	300	344	335
011	Berrien County ^d	200	161	144	0	3	3
012	Branch County ^d	100	73	66	0	0	0
013	Calhoun County ^d	100	77	71	0	0	0
014	Cass County ^d	400	330	291	0	0	0
015	Charlevoix County	0	0	0	3,400	2,937	2,058
016	Cheboygan County	0	0	0	0	0	0
017	Sault Ste. Marie Unit	0	0	0	0	0	0
018	Clare County	900	764	761	9,200	7,894	5,927
019	Clinton County ^d	1,200	1,004	766	0	0	0
020	Crawford County	600	635	632	700	602	600
021	Manistique Unit	0	0	0	0	0	0
022	Iron Mountain Unit	1,000	861	859	4,000	3,471	2,628
023	Eaton County ^d	100	76	71	0	0	0
024	Emmet County	0	0	0	1,500	1,290	1,048
025	Genesee County ^d	0	0	0	0	0	0
026	Gladwin County	1,200	1,028	1,021	8,900	7,468	5,394
027	Watersmeet Unit	0	0	0	0	0	0
028	Grand Traverse County	0	0	0	300	337	336
029	Gratiot County ^d	1,600	1,300	1,014	0	0	0
030	Hillsdale County ^d	400	325	284	0	0	0
031	Nisula Unit	0	0	0	0	0	0
032	Huron County ^d	1,500	1,208	1,031	0	0	0
033	Ingham County ^d	600	482	383	0	0	0
034	Ionia County ^d	1,200	1,008	777	0	0	0

^aSee Figure 2 for the locations of DMUs.

^bNumber of licenses sold could exceed the quota because junior licenses do not count towards the quota.

^cNumber of license buyers does not add up to statewide total because hunters could purchase licenses in more than one DMU.

^dAlso part of either DMU 486 or DMU 487.

^eSpecial deer hunts on public land. Licenses for these DMUs were available on a local basis.

Appendix A (continued). Antlerless deer hunting license quotas, number of antlerless licenses sold, and number of hunters purchasing an antlerless license in Michigan during 2011, summarized by Deer Management Unit and license type (public and private lands).

DMU ^a	DMU Name	Public land			Private land		
		License quota	Licenses sold ^b	License buyers ^c	License quota	Licenses sold ^{b,c}	License buyers ^c
035	Iosco County ^d	1,000	802	788	0	0	0
036	Amasa/Michigamme Unit	0	0	0	0	0	0
037	Isabella County ^d	100	77	72	0	0	0
038	Jackson County ^d	1,600	1,244	1,079	0	0	0
039	Kalamazoo County ^d	900	730	622	0	0	0
040	Kalkaska County	0	0	0	0	0	0
041	Kent County ^d	1,100	888	771	0	0	0
042	Keweenaw Unit	0	0	0	0	0	0
043	Lake County	0	0	0	3,000	2,593	2,578
044	Lapeer County ^d	2,000	1,661	1,473	0	0	0
045	Leelanau County	0	0	0	200	256	255
046	Lenawee County ^d	400	330	277	0	0	0
047	Livingston County ^d	1,400	1,137	991	0	0	0
048	Newberry Unit	0	0	0	0	0	0
050	Macomb County	200	141	131	4,000	2,642	2,157
051	Manistee County	0	0	0	3,000	2,711	2,693
053	Mason County	0	0	0	5,000	4,570	3,753
054	Mecosta County ^d	200	165	164	0	0	0
055	Menominee Unit	2,000	1,758	1,274	9,000	6,141	4,535
056	Midland County ^d	1,500	1,257	1,146	0	0	0
057	Missaukee County	0	0	0	3,200	2,897	2,488
058	Monroe County	200	155	154	1,800	1,634	1,202
059	Montcalm County ^d	1,500	1,253	1,061	0	0	0
060	Montmorency County ^d	5,000	3,791	3,142	0	0	0
061	Muskegon County ^d	800	652	647	0	0	0
063	Oakland County ^d	2,500	2,046	1,764	0	0	0
064	Oceana County	500	504	500	4,500	4,070	3,188
065	Ogemaw County	1,000	884	882	7,000	5,991	4,510
066	Ontonagon County	0	0	0	0	0	0
067	Osceola County	0	0	0	5,000	4,486	3,744
068	Oscoda County ^d	5,000	4,253	3,487	0	0	0
069	Otsego County	0	0	0	0	0	0

^aSee Figure 2 for the locations of DMUs.

^bNumber of licenses sold could exceed the quota because junior licenses do not count towards the quota.

^cNumber of license buyers does not add up to statewide total because hunters could purchase licenses in more than one DMU.

^dAlso part of either DMU 486 or DMU 487.

^eSpecial deer hunts on public land. Licenses for these DMUs were available on a local basis.

Appendix A (continued). Antlerless deer hunting license quotas, number of antlerless licenses sold, and number of hunters purchasing an antlerless license in Michigan during 2011, summarized by Deer Management Unit and license type (public and private lands).

DMU ^a	DMU Name	Public land			Private land		
		License quota	Licenses sold ^b	License buyers ^c	License quota	Licenses sold ^{b,c}	License buyers ^c
070	Ottawa County ^d	400	326	285	0	0	0
071	Presque Isle County ^d	4,000	1,937	1,544	0	0	0
072	Roscommon County	0	0	0	0	0	0
073	Saginaw County ^d	200	190	185	0	0	0
074	St. Clair County	700	524	487	9,500	7,464	6,047
075	St. Joseph County ^d	300	251	206	0	0	0
076	Sanilac County ^d	2,000	1,506	1,140	0	0	0
078	Shiawassee County ^d	200	155	145	0	0	0
079	Tuscola County ^d	2,700	2,206	1,812	0	0	0
080	Van Buren County ^d	200	165	145	0	0	0
081	Washtenaw County ^d	1,500	1,169	999	0	0	0
082	Wayne County	100	68	55	1,200	848	714
083	Wexford County	0	0	0	3,400	2,919	2,347
115	Beaver Island	200	116	103	300	223	169
117	Drummond Island	0	0	0	0	0	0
121	Bay De Noc	0	0	0	0	0	0
122	Norway Unit	200	173	163	2,500	1,095	863
127	Ironwood Unit	0	0	0	0	0	0
131	Twin Lakes Unit	0	0	0	0	0	0
135	Tawas Unit ^d	200	175	144	0	0	0
145	North Manitou Island ^e	0	0	0	0	0	0
149	Round/Bois Blanc Island	0	0	0	0	0	0
152	Gwinn Unit	0	0	0	500	408	353
155	Gladstone Unit	400	322	311	3,000	1,977	1,587
162	South Newaygo County ^d	500	457	457	0	0	0
173	Shiawassee Flats	0	0	0	0	0	0
174	St. Clair Flats ^d	400	0	0	300	123	102
245	South Fox Island ^e	0	0	0	0	0	0
249	Trout Lake Unit	0	0	0	0	0	0
252	Rock Unit	0	0	0	500	435	379
255	LaBranche Unit	400	350	348	1,300	1,131	864
262	North Newaygo County	0	0	0	2,500	2,287	2,271
273	Shiawassee Unit ^{d,e}	1,400	781	752	0	0	0
349	Engadine Unit	0	0	0	0	0	0
452	Core Area ^d	3,000	1,477	1,255	0	0	0
486	Southern Multi-County	0	0	0	500,000	283,201	203,540
487	Northern Multi-County	0	0	0	72,100	25,702	19,979
	Deer Management						
NA	Assistance Permits	NA	NA	NA	NA	8,219	662
NA	Managed Deer Hunt Permits ^e	NA	343	304	NA	NA	NA

^aSee Figure 2 for the locations of DMUs.

^bNumber of licenses sold could exceed the quota because junior licenses do not count towards the quota.

^cNumber of license buyers does not add up to statewide total because hunters could purchase licenses in more than one DMU.

^dAlso part of either DMU 486 or DMU 487.

^eSpecial deer hunts on public land. Licenses for these DMUs were available on a local basis.

Appendix B. Estimated number of deer hunters, hunting effort, and deer harvested in Michigan during 2011, summarized by Deer Management Unit.

DMU ^d	Hunters ^{b,c}		Hunting effort (days) ^b		Deer harvested (all seasons combined) ^a					
					Antlerless		Antlered bucks		Sexes combined	
	No.	95% CL ^e	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL
001	7,952	873	67,417	10,868	1,849	484	1,773	425	3,622	690
003	14,132	1,160	211,426	25,321	3,409	733	2,906	557	6,315	1,054
004	5,113	702	51,547	9,880	1,084	340	1,306	361	2,390	540
005	7,500	849	69,015	11,767	1,500	486	1,635	387	3,135	691
006	7,620	850	89,226	15,290	1,834	476	2,055	466	3,889	735
007	7,507	853	66,977	10,043	472	207	1,954	444	2,426	501
008	11,952	1,068	172,682	21,879	3,593	733	3,710	670	7,303	1,119
009	4,799	679	65,048	13,272	1,336	418	1,380	367	2,716	633
010	4,839	684	50,333	10,544	617	257	1,306	377	1,923	495
011	5,783	749	88,944	15,954	1,034	384	1,473	427	2,507	652
012	6,039	763	82,152	14,028	2,796	670	1,832	485	4,628	946
013	12,341	1,083	192,989	24,027	5,459	1,007	4,387	714	9,846	1,427
014	6,577	795	104,771	17,972	2,007	610	1,672	452	3,679	902
015	4,852	681	61,708	13,244	1,311	416	1,256	351	2,567	615
016	6,539	794	72,416	12,715	322	166	2,069	466	2,391	520
017	4,482	661	51,360	10,438	200	136	949	294	1,149	332
018	15,058	1,192	173,144	20,206	4,195	720	4,268	675	8,463	1,107
019	10,748	1,006	165,305	22,193	4,063	895	3,838	690	7,901	1,295
020	8,632	911	80,309	12,319	1,018	315	1,286	340	2,304	502
021	7,783	869	87,626	13,866	467	219	1,643	422	2,110	491
022	10,337	992	99,717	13,472	2,351	576	3,570	621	5,921	936
023	10,189	987	145,911	20,239	3,441	825	3,029	573	6,470	1,151
024	4,990	692	51,354	10,103	667	248	1,381	366	2,048	494
025	9,541	947	135,415	19,315	2,163	500	2,188	478	4,351	809
026	14,910	1,180	167,711	19,073	4,472	807	3,538	601	8,010	1,133
027	2,673	513	26,017	6,773	167	125	853	289	1,020	323
028	6,145	756	74,260	13,414	649	256	1,724	400	2,373	509
029	8,870	915	119,191	18,369	3,571	801	3,685	656	7,256	1,197
030	9,928	973	132,104	17,846	3,979	776	3,019	571	6,998	1,091
031	4,211	640	34,219	6,959	341	200	1,485	380	1,826	436
032	12,092	1,062	147,631	18,562	4,752	891	4,297	655	9,049	1,289
033	8,812	919	120,102	17,843	3,761	818	2,524	561	6,285	1,149
034	12,462	1,082	171,858	21,111	5,422	1,046	4,434	743	9,856	1,491

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^bColumn totals for hunting effort and harvest may not equal regional and statewide totals because of rounding errors.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one DMU.

^dSee Figure 2 for the locations of DMUs.

^e95 confidence limit.

Appendix B (continued). Estimated number of deer hunters, hunting effort, and deer harvested in Michigan during 2011, summarized by Deer Management Unit.

DMU ^d	Hunters ^{b,c}		Hunting effort (days) ^b		Deer harvested (all seasons combined) ^a					
	No.	95% CL ^e	No.	95% CL	Antlerless		Antlered bucks		Sexes combined	
					No.	95% CL	No.	95% CL	No.	95% CL
035	9,020	930	99,676	15,048	2,203	538	2,087	472	4,290	796
036	3,513	586	25,537	5,250	60	72	1,226	358	1,286	372
037	11,858	1,054	146,125	18,407	5,180	1,035	4,263	680	9,443	1,383
038	15,903	1,224	233,208	25,729	5,348	865	4,078	667	9,426	1,281
039	8,604	907	121,830	17,633	2,413	568	2,403	528	4,816	894
040	7,390	847	65,274	10,292	460	229	1,296	349	1,756	430
041	17,239	1,263	229,854	23,634	4,276	729	4,223	670	8,499	1,108
042	2,550	495	26,527	6,305	131	106	867	299	998	317
043	14,833	1,188	151,822	17,655	1,829	428	2,262	489	4,091	718
044	15,466	1,201	217,546	24,477	6,060	1,040	4,161	686	10,221	1,416
045	3,677	591	48,191	11,641	379	176	979	343	1,358	412
046	7,813	861	110,794	17,144	2,213	560	2,315	515	4,528	866
047	13,463	1,127	196,841	23,916	3,255	679	3,606	641	6,861	1,063
048	5,331	721	41,197	7,421	176	142	834	278	1,010	321
050	4,469	650	51,834	9,982	946	327	1,265	370	2,211	562
051	9,529	954	105,572	15,261	2,121	505	2,444	491	4,565	781
053	12,160	1,075	136,460	17,459	3,265	610	3,379	593	6,644	985
054	13,730	1,135	168,804	20,277	5,040	884	4,499	706	9,539	1,281
055	12,597	1,093	142,517	16,940	4,344	818	4,727	686	9,071	1,200
056	11,145	1,028	151,037	20,059	3,534	707	3,291	604	6,825	1,073
057	9,765	961	95,093	13,317	1,635	428	2,787	537	4,422	767
058	4,231	635	50,984	10,971	301	158	616	265	917	347
059	16,058	1,221	221,049	24,079	7,921	1,310	5,946	800	13,867	1,744
060	8,145	889	69,082	11,193	1,656	478	1,197	360	2,853	643
061	9,913	971	152,194	20,945	2,275	600	1,589	418	3,864	799
063	11,599	1,053	163,322	22,111	3,377	758	2,138	487	5,515	1,014
064	10,294	988	146,177	19,865	2,789	600	2,896	536	5,685	929
065	14,555	1,174	151,880	17,817	3,518	693	3,381	602	6,899	1,017
066	4,741	681	41,112	7,987	309	198	1,894	422	2,203	487
067	11,918	1,057	122,422	15,842	2,973	607	3,785	633	6,758	963
068	9,444	955	71,495	10,255	1,836	458	1,453	378	3,289	635
069	5,390	720	50,127	9,526	139	99	987	318	1,126	335

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^bColumn totals for hunting effort and harvest may not equal regional and statewide totals because of rounding errors.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one DMU.

^dSee Figure 2 for the locations of DMUs.

^e95 confidence limit.

Appendix B (continued). Estimated number of deer hunters, hunting effort, and deer harvested in Michigan during 2011, summarized by Deer Management Unit.

DMU ^d	Hunters ^{b,c}		Hunting effort (days) ^b		Deer harvested (all seasons combined) ^a					
	No.	95% CL ^e	No.	95% CL	Antlerless		Antlered bucks		Sexes combined	
					No.	95% CL	No.	95% CL	No.	95% CL
070	9,125	924	132,859	18,705	2,622	628	1,996	447	4,618	846
071	8,748	919	86,870	12,752	2,155	579	2,450	502	4,605	845
072	11,311	1,040	121,282	17,396	895	292	2,694	532	3,589	659
073	9,649	951	152,974	20,612	3,328	719	3,040	597	6,368	1,064
074	11,707	1,049	175,128	22,801	2,600	626	2,937	569	5,537	951
075	6,027	763	104,428	18,137	3,060	798	2,076	504	5,136	1,081
076	15,425	1,199	181,307	20,398	6,456	1,039	5,047	741	11,503	1,495
078	9,516	952	141,957	20,565	3,488	788	3,762	663	7,250	1,197
079	13,970	1,150	180,844	20,961	4,354	850	4,496	690	8,850	1,222
080	8,426	899	138,161	19,916	2,506	622	1,841	439	4,347	858
081	10,893	1,018	148,484	20,017	3,665	758	2,464	503	6,129	1,069
082	2,006	441	29,429	9,832	382	214	415	197	797	324
083	10,947	1,017	106,522	15,063	1,685	438	2,652	544	4,337	766
115	414	200	3,329	1,879	204	136	108	102	312	211
117	1,102	325	8,036	2,948	83	88	141	114	224	144
121	2,531	501	26,114	7,109	219	144	950	323	1,169	361
122	2,996	541	38,627	9,801	861	340	742	280	1,603	480
127	2,391	482	32,375	8,940	224	139	624	240	848	286
131	2,260	464	23,527	6,338	127	97	825	292	952	316
135	795	276	9,895	5,277	54	72	138	113	192	134
145	55	75	382	512	0	0	0	0	0	0
149	331	182	3,126	2,110	28	50	137	113	165	124
152	4,332	648	42,987	8,782	468	230	1,371	365	1,839	437
155	4,892	690	52,421	10,065	857	331	1,247	359	2,104	494
162	12,048	1,062	146,257	18,714	2,581	558	2,330	495	4,911	806
173	1,833	415	20,893	7,781	279	161	399	224	678	305
174	84	92	946	1,144	0	0	0	0	0	0
245	0	0	0	0	0	0	0	0	0	0
249	5,106	706	42,360	7,827	182	121	872	281	1,054	323
252	2,223	462	23,761	6,986	302	184	496	223	798	289
255	2,794	520	30,973	7,929	537	240	1,174	352	1,711	489
262	6,462	785	74,858	11,833	949	305	1,221	376	2,170	544
273	112	106	827	1,089	56	72	1	0	57	72
349	1,353	361	16,207	5,514	93	91	191	134	284	162
452	10,826	1,028	100,758	13,591	2,388	632	2,659	526	5,047	903

^aHarvest estimates do not include deer taken with DMA permits. An additional 5,293 deer were taken with these permits.

^bColumn totals for hunting effort and harvest may not equal regional and statewide totals because of rounding errors.

^cNumber of hunters does not add up to statewide total because hunters can hunt in more than one DMU.

^dSee Figure 2 for the locations of DMUs.

^e95 confidence limit.

Minnesota Deer Status Report

2012 Midwest Deer & Wild Turkey Study Group – Custer State Park, SD

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 4 harvest strategies (lottery, hunter choice, managed, intensive) are implemented within each DMU ($n=129$), based upon estimated deer density in relation to population goal. In general, deer populations are below goal in lottery DMUs, at goal or exceed goal by $<10\%$ in hunter choice DMUs, exceed goal by $10-20\%$ in managed DMUs, and exceed goal by $>20\%$ in intensive DMUs. Bag limits are 1, 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 hunter choice, 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 (bTB) and chronic wasting disease (CWD) DMUs are open to hunting during the archery, early-antlerless, youth, statewide firearm, late southeast firearm (CWD only) 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 hunter choice, managed, or intensive DMUs, and may purchase bonus permits for taking additional antlerless deer in managed/intensive 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. Use of bait is prohibited. Regardless of area or season hunted, only 1 legal buck is allowed per calendar year. Registration is mandatory within 24 hours of season closure and may be completed by telephone, internet, or at traditional, walk-in registration stations. For telephone / internet registration, hunters receive a confirmation number to be written on the license. At walk-in registration stations, hunters are given a possession tag to attach to the carcass. In bTB, CWD, and antler point restriction areas, hunters cannot use telephone/internet registration and must present their deer at walk-in registration stations.

Population Trends

Moderate to severe winters during 3 of the last 5 years have decreased deer numbers in the northeast and DMUs are at, or slightly below, goal. Deer numbers remain above goal in several DMUs along the agricultural/forest transition line in northwest, central, east-central and southeast Minnesota. Populations have declining, however, in most DMUs where early antlerless seasons have been implemented for multiple years. Moderate to severe winters during 2 of the last 3 winters in the intensively cultivated areas in southwest and west-central Minnesota have decreased deer numbers and many DMUs remain below goal. The 2012, statewide pre-fawn population estimate is 600,000. 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.

2011 Season Summary

In 2011, hunters registered 192,331 deer (Table 1), down 7% from 2010. Firearm, muzzleloader, and archery kill decreased 7%, 18% and 7%, respectively. Lower deer populations combined with high winds during the first weekend of the firearm season contributed to the decline. Firearm antlered harvest decreased 14% from 2010, and was 21% lower than the 10-year average. Firearm antlerless harvest was stable in 2011, but was 22% below the 10-year average. Antlerless deer comprised 54% of the firearm harvest, similar to recent trends of 54-59% since 2003. Firearm hunters account for 85% of total harvest, while archers and muzzleloader hunters account for 11% and 4%, respectively. Firearm and archery license sales were stable, while muzzleloader license sales increased 7% (Table 1). During 2011, DMUs were partitioned into 32 lottery areas, 40 hunter choice areas, 34 managed areas, and 23 intensive areas. An early

antlerless season was not held in 2011. A complete harvest breakdown by weapon type is presented in Table 1.

2012 Season Outlook

Based upon the winter severity index (WSI; measured by the number of days with ambient temperatures of $<0^{\circ}\text{F}$ and days with ≥ 15 inches of snow cover), the winter of 2011-12 was mild throughout the state. Snow cover was sparse statewide and did not accumulate to >8 inches in northern counties until mid-to-late January. Simulation modeling indicates populations have declined throughout much of the forest zone in recent years and deer populations are at, or slightly below, density goals. Management strategy will be lottery or managed. Deer numbers remain above goal in several DMUs along the agricultural/forest transition line. Management strategy will continue as either managed or intensive in these units. Deer populations remain at or below goal throughout most agricultural DMUs. Most units will be designated as lottery or hunter choice during 2012. Statewide, the pre-hunt deer population is estimated at 920,000. For 2012, DMUs will be partitioned into 58 lottery units, 40 hunter choice units, 23 managed units, and 8 intensive units. There will be no early antlerless season in 2012.

2012 Regulation Changes

Early Antlerless Season: Because deer herds are largely within goals, there will be no early antlerless firearm season in 2012. This season is considered annually when formulating deer management recommendations.

CWD Surveillance: With the recent discovery of CWD in western Wisconsin, disease surveillance will be conducted during weekends of the firearm season in east-central Minnesota (DMUs 159, 183, and 225). Phone and internet registration options will be deactivated in these areas and deer must be brought to walk-in registration stations. Submission of tissue samples for disease testing will be voluntary and there will be no carcass transport restrictions. In 2012, CWD was also discovered in a captive European red deer farm in Ramsey County. Because there is no traditional firearm deer season within this metropolitan area, CWD samples will come from vehicle-killed deer, metro archery hunts, city deer reduction permits, and opportunistic sampling.

Research Activities

Antler Point Restrictions: Beginning in 2010, antler point restrictions were implemented within all 300-level DMUs ($n=11$) 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.

Deer Movement Related to Bovine Tuberculosis Transmission: The goal of this pilot research study was to provide a better understanding of white-tailed deer movements and habitat use in the transitional landscape of northwestern Minnesota, where a recent outbreak of bTB heightened awareness of disease transmission risks between deer and cattle. In total, 21 deer (5

males, 16 females) were collared during this study and 10 deer (48%) remained alive until the planned collar blow-off date of April 15, 2012. Collar malfunctions occurred in 2 deer (10%), where no movement data were recorded. Overall mortality rate was 53% ($n = 10$) and was attributed to wolves ($n = 8$, 80%), hunters ($n = 1$, 10%) and unknown cause ($n = 1$, 10%). Mean home range size for deer ($n = 9$) surviving through the end of the study was 46.7 km² (SE = ± 10.1). Seven deer were migratory, traveling 4–20 km to distinct winter ranges over 2-3 day periods. Deer visits occurred on 6 farms in the study area, with 1 farm accounting for 61% of the visits. Five deer accounted for all farm visits, including 2 deer visiting only 1 farm, 2 deer visiting 2 farms, and 1 deer visiting 3 farms. Over 75% of deer visits occurred in areas where cattle were present, either on a pasture or in an area with a feeding site and/or stored feed (hay bales). Most farm visits occurred during spring (March through May) and primarily during the night (from 12am to 6am). Serological screening of deer at capture for 9 common cattle diseases indicated exposure to bovine parainfluenza 3 virus (24%), malignant catarrhal fever (19%), and infectious bovine rhinotracheitis (9%). Fecal parasitology indicated 13 (65%) deer had evidence of liver fluke (*Fascioloides magna*) infection and strongyle-type ova was detected in 4 (20%) deer. This study provided baseline information regarding cattle-deer interactions critical to transmission of bTB in this region, and highlighted the potential for deer to function as vectors for disease transmission in transitional areas where habitat use between wildlife and livestock overlap.

Distance Sampling: We are utilizing distance sampling during roadside spotlight surveys to estimate deer density in agricultural DMUs. Distance sampling provides alternative field techniques for estimating deer population size when, and where, aerial surveys are inappropriate. During spring 2012, surveys were completed in 3 DMUs.

Aerial Deer Surveys: We are utilizing quadrat-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 winter 2011-12, no surveys were completed because of inadequate snow cover.

Current Deer Management Issues

Bovine Tuberculosis: During fall 2011, 561 hunter-killed white-tailed deer were tested for bTB in northwest Minnesota with no positive cases detected. This marked the 7th consecutive year that MDNR has conducted surveillance for this disease in deer since 2005, when bTB was first detected in a northwest cattle farm. The disease has since been found in 12 cattle operations and 27 free-ranging white-tailed deer. Both deer and cattle have the same strain of bTB, which has been identified as one that is consistent with the disease found in cattle in the southwestern United States and Mexico. The Board of Animal Health has been leading efforts to eradicate the disease in Minnesota's cattle, which have included the depopulation of all infected herds, a buy-out program that removed 6,200 cattle from the affected area, and mandatory fencing of stored feeds on remaining farms. No new infections have been detected in either cattle or deer since 2009. The state regained its bTB-Free accreditation in October 2011; however, some testing requirements remain on cattle herds within the endemic area. The proximity of the bTB-infected deer to infected cattle herds, the strain type, and low disease prevalence (<0.1%) suggests this disease spilled over from cattle to wild deer in this area of the state. In addition, the lack of

infected yearlings or fawns and limited geographic distribution of infected adults further supports that deer are not a wildlife reservoir for this disease in Minnesota. MDNR plans to continue to monitor infection in the local deer population through hunter-killed deer surveillance during fall 2012, and any further aggressive management actions (e.g., sharpshooting deer in key locations) will be dependent on surveillance results.

Chronic Wasting Disease: To date, CWD has been diagnosed in 3 captive elk (*Cervus elaphus*) herds and 1 captive white-tailed deer herd within the state of Minnesota. Two of the elk herds (Stearns and Aitkin counties) were discovered in 2002 and depopulated; no additional CWD-positive animals were found. In spring 2006, a captive white-tailed deer from a mixed deer/elk herd in Lac Qui Parle County was discovered to be infected with CWD. That herd was also depopulated without additional infection being detected. In early 2009, a third captive elk herd (Olmsted County) was found infected with CWD and, following depopulation of >600 animals, 4 elk were confirmed with the disease. Beginning in 2009, surveillance efforts have been focused on southeast Minnesota. During CWD surveillance efforts in 2010, 1 deer tested positive for the disease (0.2% apparent prevalence), marking the first detection of CWD in Minnesota's wild deer population. In response to the positive deer detection, MDNR conducted an aerial deer survey in a 10-mile radius of the index case during January 2011 and estimated 6,200 deer (19 deer/mi²). Supplemental surveillance efforts, which included landowner shooting permits and sharpshooters, were conducted during February–March 2011 and 752 adult deer samples were collected; all animals tested CWD-negative. MDNR has subsequently created a 306 mi² CWD Management Zone (DMU 602) to facilitate special hunts, permits, and extended seasons to reduce deer density. To prevent further disease spread, recreational feeding of deer has been banned in a 4-county area surrounding the CWD-positive kill site. Baiting deer has been illegal in Minnesota since 1991. During the 2011 deer season, approximately 2,400 deer were tested in DMU 602 and the 6 adjoining DMUs, with no positives detected. MDNR will continue to conduct CWD surveillance of hunter-killed deer during fall 2012 under the following restrictions. Bag limit is 1 legal buck and an unlimited number of antlerless deer. Disease management permits (\$2.50) may be used for antlerless deer only. Antler point restrictions and cross-tagging restrictions enacted in 2010 are not in effect in this area. All deer taken within the CWD zone must be registered within the zone at walk-in registration stations (telephone / internet registration is disabled). Submission of lymph nodes is mandatory for all adult deer taken during all deer seasons (archery, youth, firearm, muzzleloader). Fawns will not be tested. Deer that are sampled must remain in the zone until a negative test result is received, which typically takes 3 business days.



2011-12

Missouri Deer Population Status Report & Deer Season Summary



Missouri Department of Conservation

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Population Status

One of the goals of deer regulation liberalizations over the last decade has been to decrease deer numbers in many parts of Missouri. In addition to liberalization of antlerless harvest, an antler-point restriction (APR) has been implemented in many counties in an effort to shift harvest pressure from bucks to does (Figure 1). Increased harvest pressure on does should result in fewer does in the population and requiring fewer does to be harvested over time to maintain populations at desirable levels. Over the past several years harvest of does has consistently exceeded antlered buck harvest. The result is a change in the sex ratio of the populations and a projected need to harvest fewer does over time as they make up a smaller portion of the population.

The 2011 deer harvest of 288,594 was a 5% increase from 2010. Most of the increase in harvest occurred across the southern half of Missouri. As populations across north, central, and western Missouri have been reduced, populations in the Ozarks and southeast Missouri have been increasing, resulting in relatively stable statewide harvest.

Efforts over the last decade to stabilize or reduce deer numbers through increased harvest liberalizations and implementation of the antler-point restriction (APR) have been successful in reducing overall deer numbers and the proportion of does in the population. Doe harvest has declined annually since 2004 in Northwest, Northeast and West-Central Missouri. Alternatively, the removal of unlimited availability of firearms antlerless permits from 18 southwest Missouri counties and continued conservative regulations across the Ozarks and southeast Missouri have resulted in slowly increasing populations. While continued liberal antlerless harvest opportunities in northern Missouri are intended to maintain deer numbers at current levels some adjustments to the availability of antlerless permits is necessary to reduce harvest pressure on deer populations in some counties. If high doe harvest rates continue in some central and western counties there is an increasing risk that populations will continue to decline below acceptable levels.

The reduction in deer numbers across many parts of Missouri is reflected in landowner and hunter responses to attitude surveys. Issues of over-abundant deer populations are now relatively isolated situations in which landowners restrict hunter access. Overall, rural deer populations appear stable or decreasing in much of Missouri. Alternatively, managing deer populations in urban communities continues to be a challenge, although a number of municipalities have changed ordinances over the last decade to allow the discharge of archery equipment. Increased hunter access to urban properties has increased deer harvest in some urban areas; however, deer populations in many cities continue to increase.

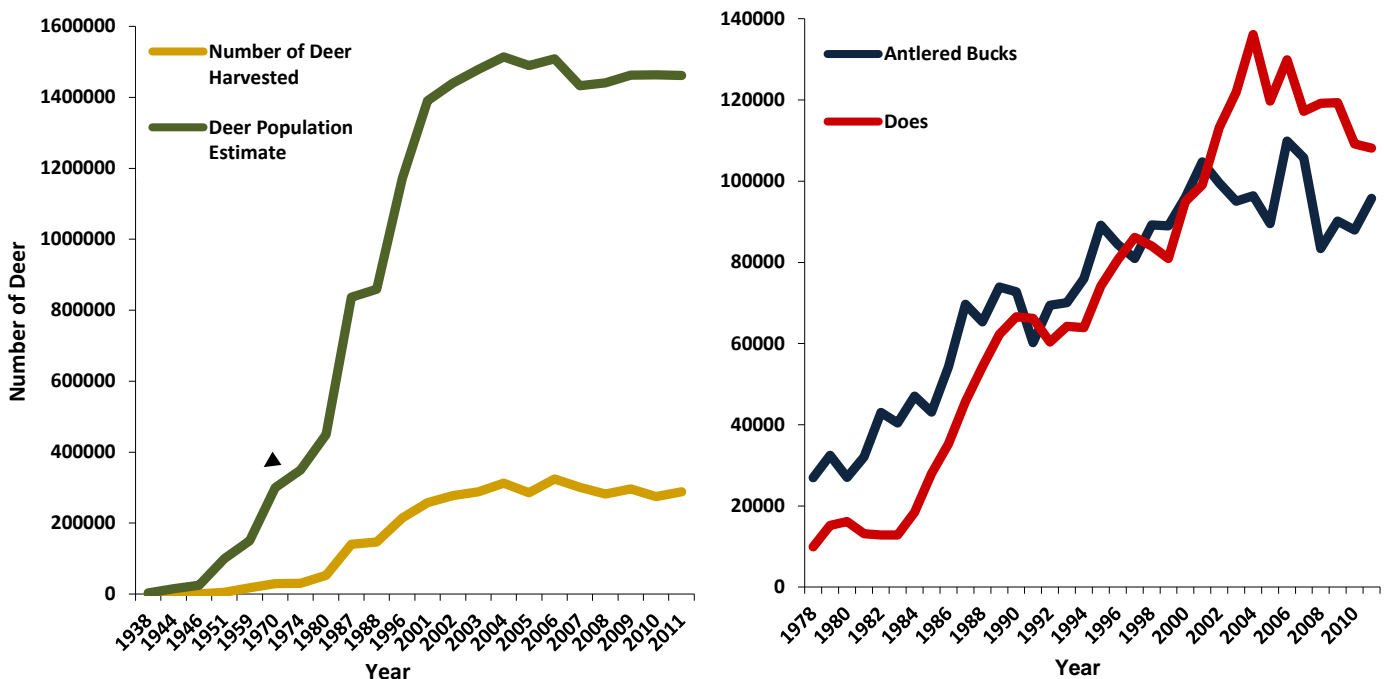


Figure 1. Statewide estimated deer population and total deer harvest from 1938 to 2011 (left). Number of antlered bucks and does in the statewide deer harvest from 1978 to 2011 (right).

The most significant event of the 2011 deer hunting season was the first finding of CWD in two free-ranging white-tailed deer in Macon County. The two adult bucks along with 1075 other adult deer were tested as part of MDC’s response to the finding of CWD in a captive facility in October of 2011. Following the finding of CWD in the free-ranging deer population the Department has identified 3 major goals for managing the disease:

1. Determine the prevalence and monitor the distribution of CWD in the affected area;
2. Provide accurate and relevant information on CWD to the public, agency staff, and other stakeholders; and
3. Initiate appropriate management actions to control or prevent the further spread of CWD

In early March the department completed, with cooperation from numerous landowners, the collection of 657 deer in close proximity to the previously identified CWD-positive free-ranging deer and CWD infected captive cervid facility in an effort to better understand the distribution and prevalence of CWD in the free-ranging deer population in north-central Missouri. Testing identified three additional CWD-positive free-ranging deer within 1 mile of the previously identified CWD-positive deer. These findings indicate that at the present time the disease is limited in distribution and has been introduced recently.

Antler Point Restriction and Harvest Rates

An antler point restriction (APR) of 4-points on at least one side was first implemented in 2004 for 29 counties in north and central Missouri (Old Central, Old North; Figure 5). In 2008, the 4-point antler restriction was expanded to all or part of 66 counties across north and west central Missouri. APR has been successful in reducing yearling buck harvest and increasing recruitment of bucks into older age classes. On average in APR counties, in 2010, 1.5 year old bucks make up 17% of the antlered buck harvest. Two and one-half, 3.5 and ≥4.5 make up 50, 25, and 8% of the antlered buck harvest, respectively (Figure 5).

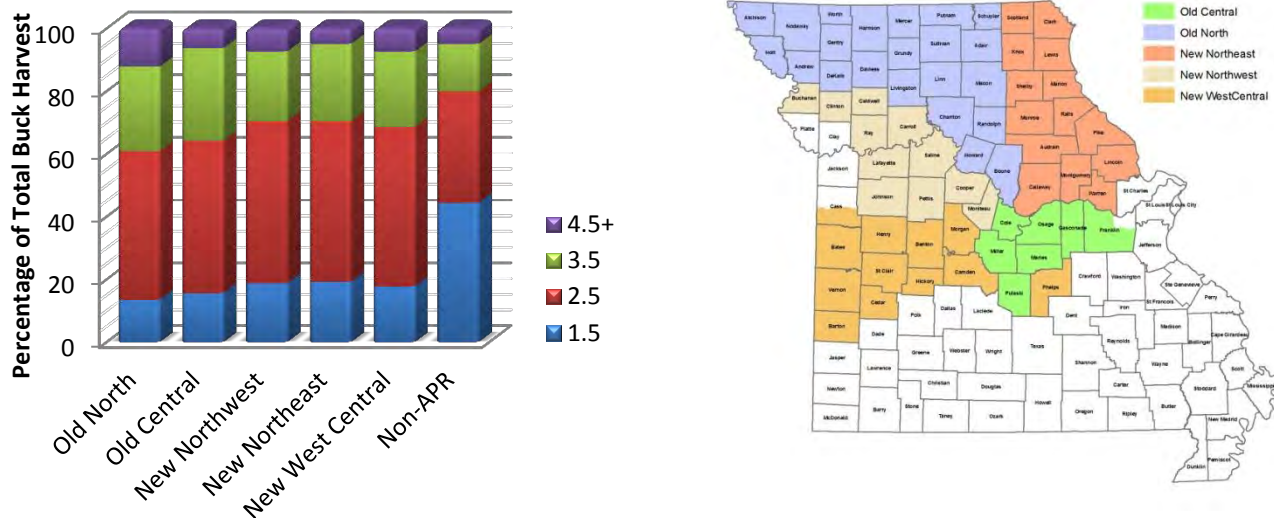


Figure 2. Portion of total antlered buck harvest made of 1.5, 2.5, 3.5, and ≥4.5 years old for different regions of Missouri under the 4-point antler restriction and those counties not under antler point restrictions in 2010, color coded to indicate implementation in 2004 (“old” counties) and 2008 (“new” counties).

Harvest of 2.5 year old bucks has increased more than any other age class as a result of the APR. Harvest of bucks ≥ 3.5 years of age is lower in the APR counties added in 2008 because there has only been one cohort of protected yearling bucks recruited into the 3.5 year-old age class since implementation of the APR in the new counties. In the next 2 to 3 years it is expected that the harvest of ≥ 3.5 year-old bucks will increase as additional bucks are recruited into older age classes.

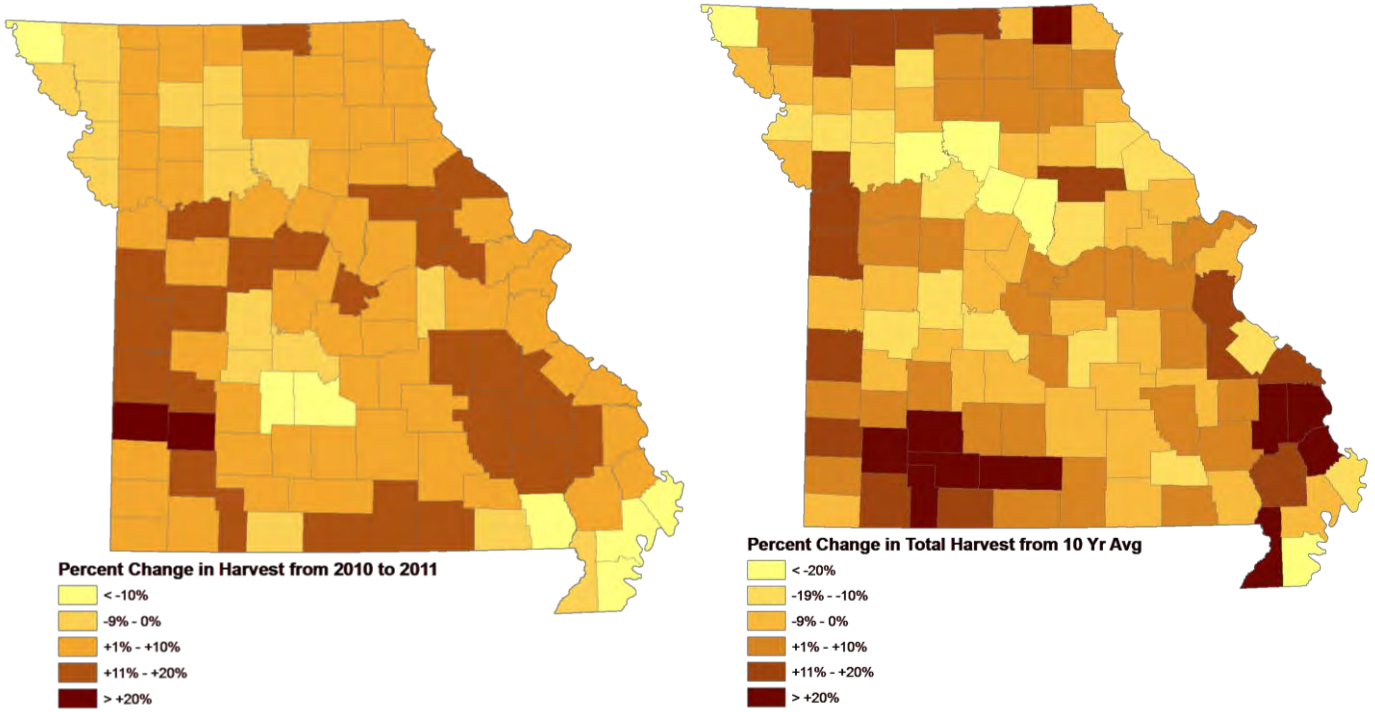


Figure 3. Percent change in total county deer harvest from 2010 to 2011 and change in 2011 harvest from the 10-year average.

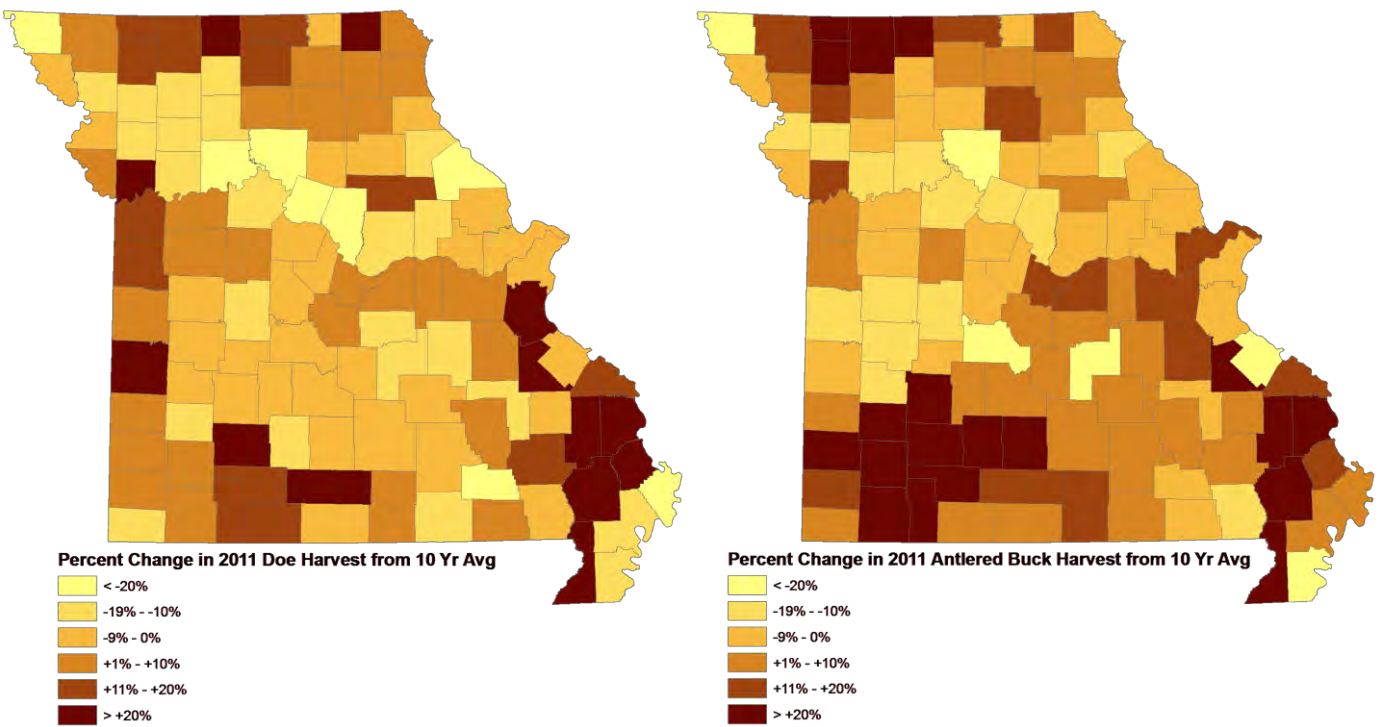


Figure 4. Percent change in 2011 doe and antlered buck harvest from the 10-year average.

Doe and Antlered Buck Harvest Rates

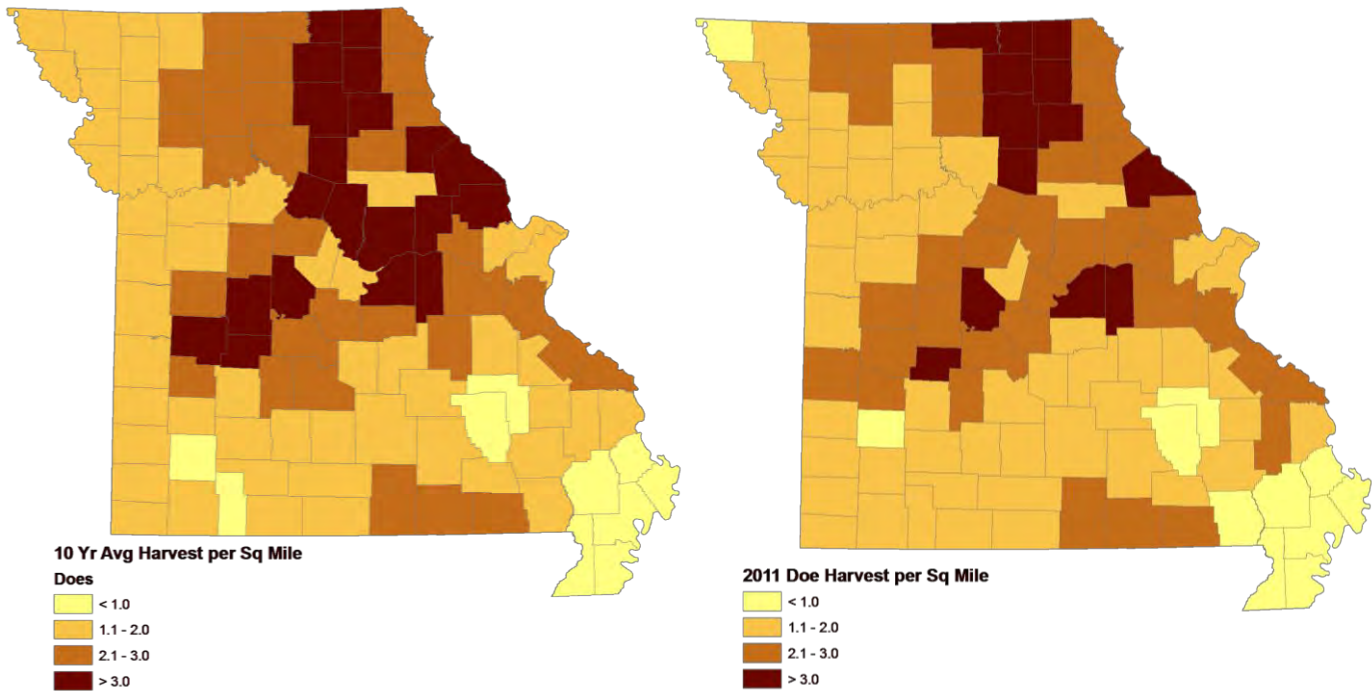


Figure 5. Ten-year average doe harvest per square mile and doe harvest rate in 2011.

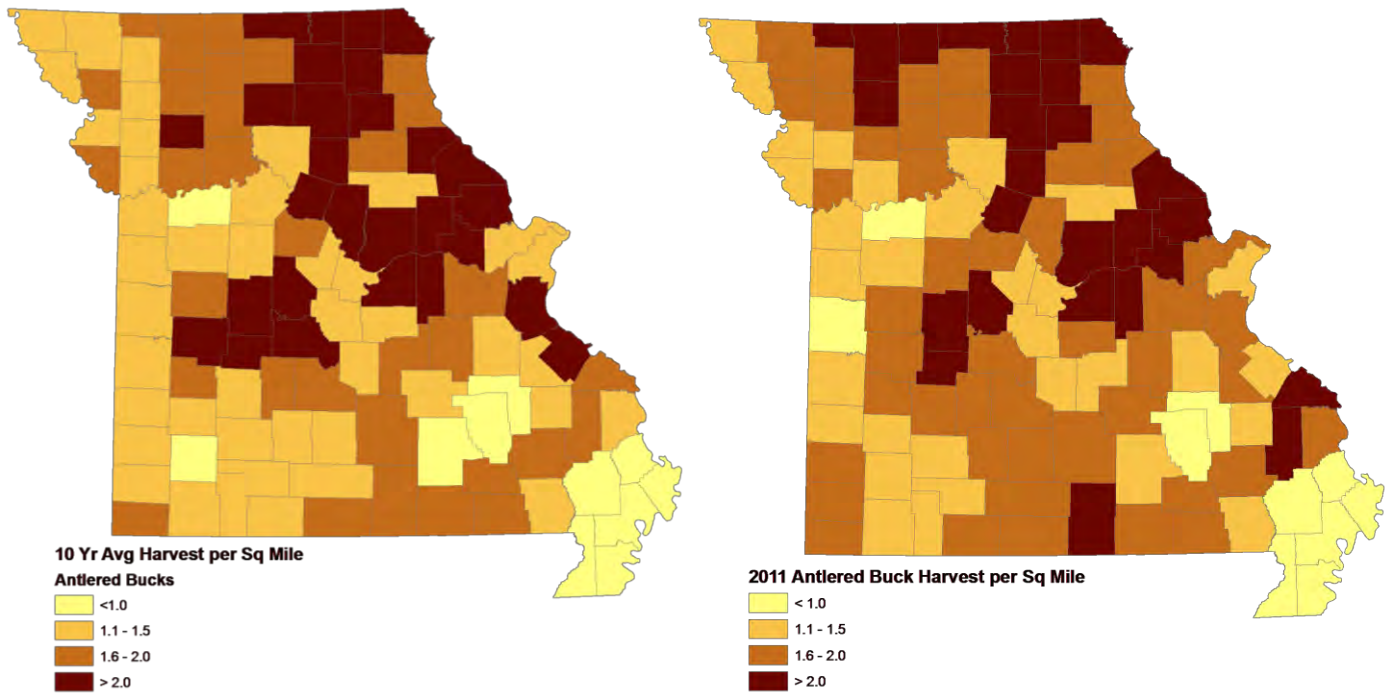


Figure 6. Ten-year average antlered buck harvest per square mile and doe harvest rate in 2011.

Bowhunter Observation Index

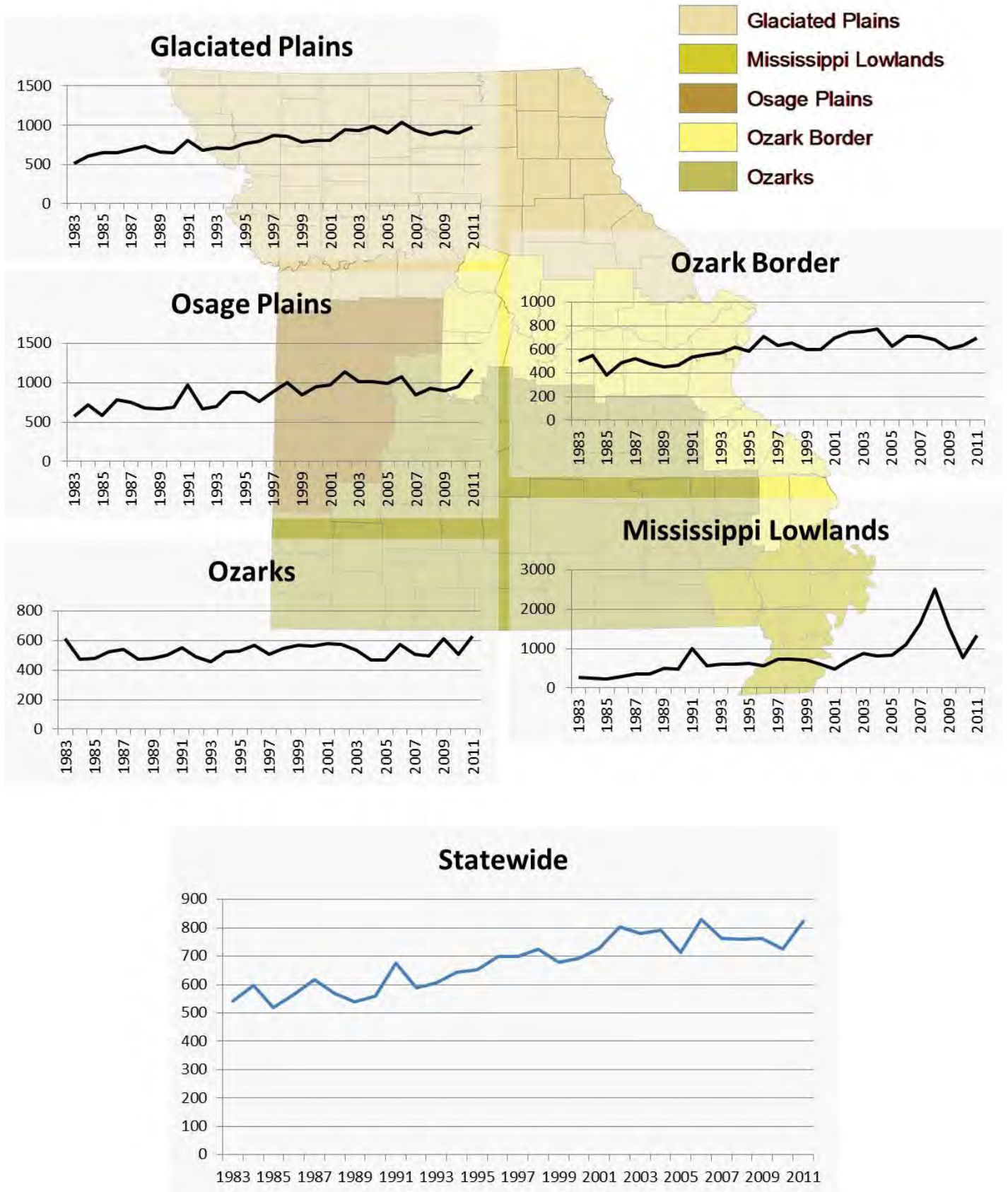


Figure 7. Regional and statewide trend in archery observation index (number of deer seen per 1,000 hours) from 1983 through 2011.

Chronic Wasting Disease

Chronic wasting disease is in a family of infectious neurological diseases known as transmissible spongiform encephalopathies (TSEs). The infectious agent of CWD is an abnormal protein known as a prion. CWD prions accumulate in the brain, spinal cord, eyes, spleen, and lymph nodes of infected cervids. The resulting damage causes abnormal behavior, loss of body function leading to emaciation and eventually death. CWD is a slowly progressing syndrome that may take in excess of a year for clinical signs to appear. During the prolonged period between infection and clinical signs of CWD infected cervids begin to excrete infectious prions into the environment via bodily processes (e.g. defecation, urination, saliva). The shedding of prions in carcasses, feces, urine, and saliva results in direct and indirect transmission between cervids. Although environmental contamination plays a role in maintenance of the disease, animal-to-animal contact is the primary mode of disease transmission. CWD may also be spread directly through the natural movements of infected free-ranging cervids, as well as the interstate movement of infected captive cervids. Indirect transmission may occur through movement of infected carcasses and offal from hunter-harvested cervids and also from contaminated soil and water sources. To determine if a cervid is CWD-positive, a laboratory examination of brain stem or lymph node tissue of the animal has to be completed for testing.



Photo Credit: Dr. Terry Kreeger, Wyoming Game and Fish Department

Research has shown CWD to only infect deer, elk, moose, and other exotic cervids, and that it cannot be spread to domestic livestock, such as sheep or cattle. Also, the Center for Disease Control (CDC) and Missouri Department of Health and Senior Services has found no evidence that CWD can infect people. While there is no scientific evidence that CWD is transmissible to humans or animals other than deer and other cervids, health officials caution that consumption of the parts when the prions accumulate is not recommended.

CWD in Missouri Update

Concerns over the impact of CWD on white-tailed deer populations prompted surveillance activities by the Missouri Department of Conservation (MDC). In 2001, MDC began targeted CWD testing of wild adult deer in poor body condition. Following the first confirmed outbreak of CWD in free-ranging white-tailed deer in Wisconsin, MDC conducted a statewide surveillance of hunter-harvested deer to assess the status of CWD in the free-ranging deer herd. From 2002-2004, nearly 22,000 samples were collected, testing for CWD in every county of the state. Targeted testing of sick deer occurred in 2005 and 2006. In 2007, MDC began a three-year program of CWD testing in which 1/3 of the state was sampled annually. Taxidermists were recruited to collect samples from adult males. Incidence of CWD is highest in adult males so this procedure targeted the most likely sex-age class to be infected. A total 4,125 deer were tested from 2007 to 2009. In an effort to increase sampling intensity and increase the likelihood of early detection, in 2010 MDC began annual sampling ½ of the state. In 2010, 1,995 samples were collected in the northern half of Missouri as part of the random CWD surveillance. An additional 920 samples were collected as part of targeted CWD surveillance in association with the finding of CWD in a captive white-tailed deer in southeast Linn County. Following the confirmation of a second CWD-positive captive white-tailed deer in northwest Macon County an additional 1,077 deer within the CWD Surveillance Zone were tested in the fall of 2011. Additionally, in 2011 approximately 3,000 samples were collected in south Missouri. In total, MDC has tested more than 34,000 deer for CWD since 2001.

Figure Distribution of deer tested for CWD in north-central Missouri from 2010-2011 as a result of the discovery of CWD in 2 captive white-tailed deer in Linn and Macon Counties.

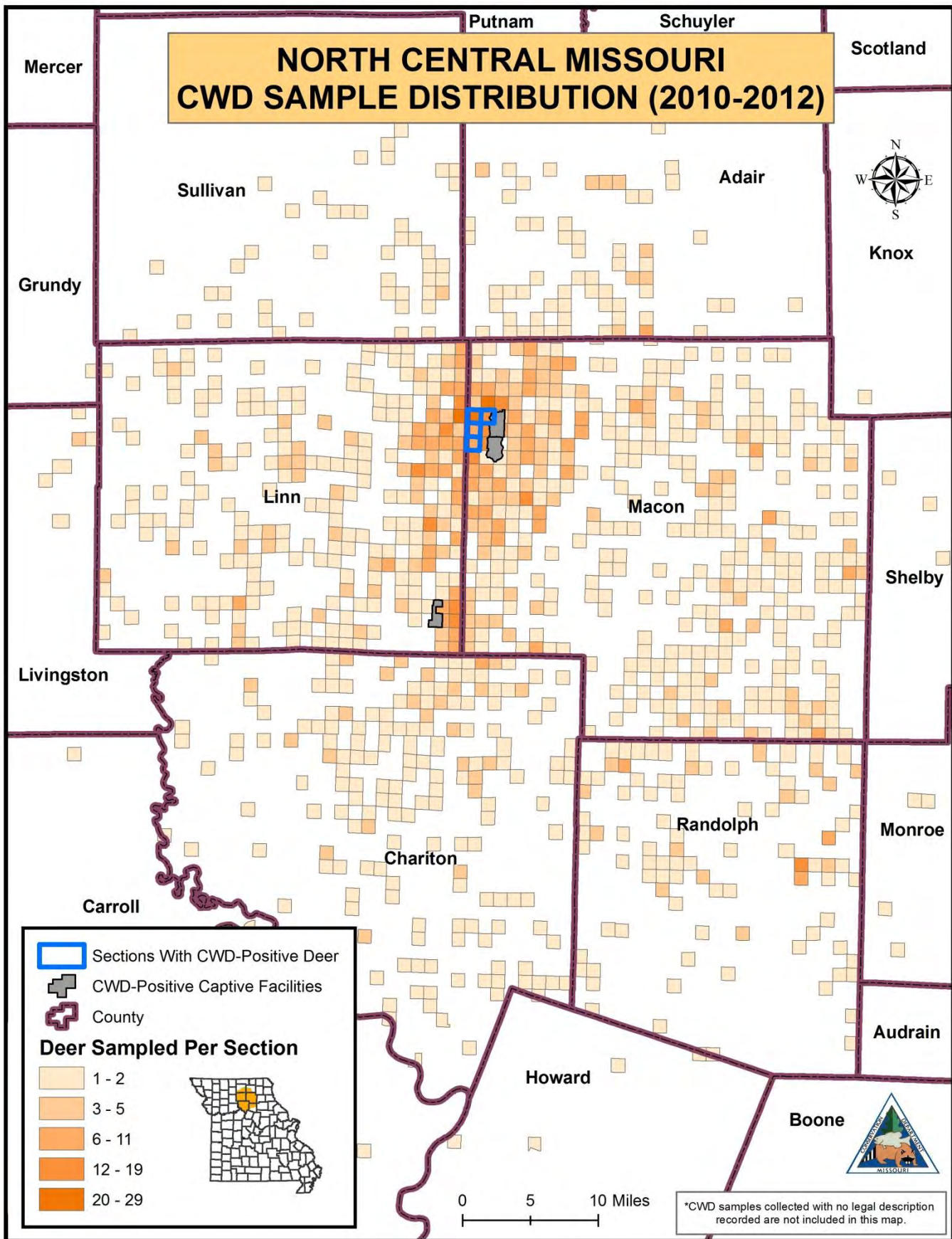


Figure 8. Distribution of deer sampled and tested for chronic wasting disease from 2010-2012 and sections in which deer have tested positive for CWD.

In January of 2012, two free-ranging, adult male white-tailed deer, harvested by hunters during the 2011 firearms season were confirmed CWD-positive in northwest Macon County (Figure 8). These are the first CWD-positives detected in the free-ranging deer population in Missouri. In response to these CWD-positives, MDC immediately initiated a sample collection effort in February of 2012. Samples were collected from 657 deer taken within 5 mile radius of the CWD-positive free-ranging deer. CWD prions were detected in 3 of the 656 deer sampled, two does and one adult buck. MDC will be developing a management strategy to reduce the effects on CWD on the free-ranging deer population in Missouri. Within the sampling area, as well as the rest of Missouri, efforts are being made to educate landowners, citizens, and hunters about CWD and its subsequent effects.

General Information about the 2011-12 Deer Season

Season Dates:

Archery Season: September 15 through January 15, closed during the November portion of the firearms deer season

Firearms Season:

- Urban Portion: October 7 - 10
- Youth Portion: November 5 - 6; January 7 - 8
- November Portion: November 12 - 22
- Antlerless Portion: November 23 - December 4
- Muzzleloader Portion: December 17 - 27

Bag Limit:

Archery Deer: Archery Deer Hunting permits allows for the taking of two deer of either sex, except that only one antlered deer may be taken before the November portion of the firearms season. Unlimited numbers of additional antlerless deer may be taken on Archery Antlerless Deer Hunting Permits in selected counties.

Firearms Deer: Firearms Any-Deer and Antlerless Permits were sold over-the-counter in unlimited quantities. An Any-Deer Permit was valid for one deer of either sex in any county. A Firearms Antlerless Permit was valid for one antlerless deer of either sex in any county. An unlimited number of Firearms Antlerless Permits could be filled in 74 counties (only the urban portion of 3 of these counties), one could be filled in 29 counties (only the rural portion of 3 of these counties) and none could be filled in 14 counties.

Harvest Reporting: Successful hunters are required to report their harvest by 10:00 p.m. of the day of harvest using Telecheck (telephone or internet).

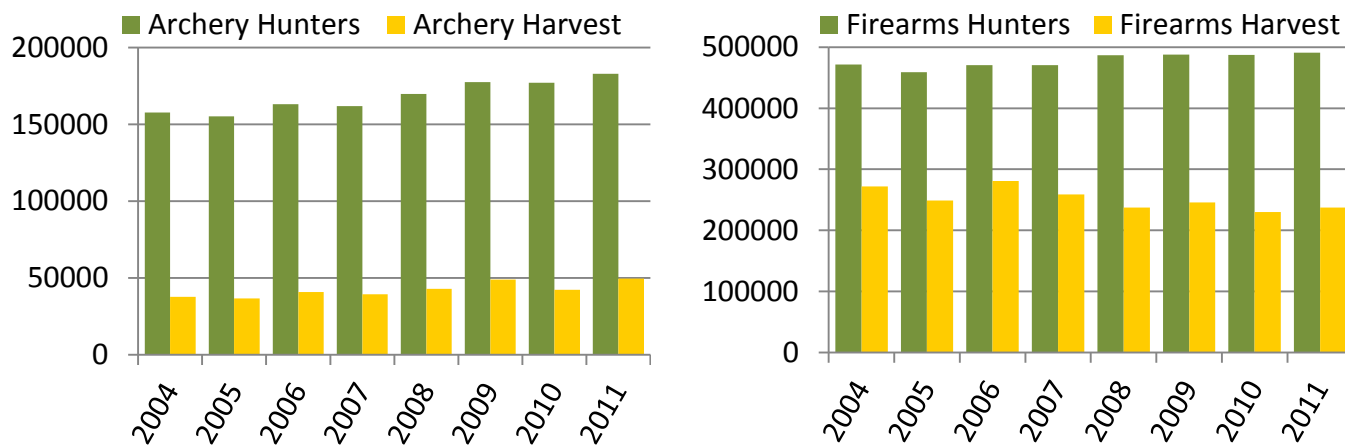


Figure 9. Trends in the number of individuals holding an archery and firearms deer hunting permit and harvest.

Archery Deer Season Summary

In 2011, archers harvested 49,530 including 25,849 does, 5,863 button bucks and 17,818 antlered bucks, which was a 17% increase from 2010 (Table 1). The 2011 archery harvest is the highest archery harvest total in Missouri, surpassing the previous harvest record from 2009 of 49,010 deer harvested. Sale of archery permits increased by 4% to 104,160; youth archery permits increased by 9% to 6,431 (Table 2). Individual nonresident archers totaled 9,408 which was a 3% increase from 2010. Total individuals possessing an archery deer permit in 2011 was 183,013, increasing by 3% from 2010's total of 177,061. This continues the apparent long term trend on increasing archery season participation, which is reflected in archery season deer harvest numbers.

Firearms Deer Season Summary

Resident firearms hunters purchased a total of 899,020 permits (i.e., all resident firearms permit types sold to youth and adults), which is up slightly (1%) from 2010 (Table 2). However, both the number of Firearms Any-Deer Permits (291,890) and the number of Firearms Antlerless Permits (219,676) (hunters age > 16 years) purchased declined by 1% for the second consecutive year (Table 2). The number of youth permits sold increased by 10%, compensating for the reduction in permits sold to hunters > 16 years of age. Landowners were issued 178,975 any-deer permits, up 2% from 2010 and nonresident firearms hunters purchased a total of 28,445 permits, up 2% from 2010 and similar to 2009 levels (Table 2). A total of 490,957 individuals possessed a firearms deer hunting permit in 2011, which was a 1% increase from 2010 (Table 3).

The early and late youth-only portions continue to be popular with 16,438 and 2,196 deer, respectively, harvested in 2011. The total youth portion harvest in 2011 increased by 27% from 2010. The total youth portion harvest consisted of 10,756 antlered bucks, 2,251 button bucks and 5,627 does (Table 1). Increasing harvest during the youth portions is most likely the result of increasing participation. The number of youth firearms any-deer and antlerless permits were both up 10% from 2010 totals.

Harvest during the Urban Zones portion stayed relatively stable from 586 in 2010 to 570 in 2011, only a 3% decrease. However, when comparing the Urban Zone harvest from 2009 of 1,457, harvest was 61% lower in 2011.

The muzzleloader portion harvest was 15,235, an 18% increase from 2010. However, when compared to the muzzleloader portion in 2009 of 15,915, harvest was 4% lower in 2011.

The 2011 antlerless portion harvest totaled 14,420, a 5% decrease from 2010 and a 35% decrease from 2009.

Managed Deer Hunts

Overall, hunters harvested 1,800 deer during the managed deer hunts in 2011, which is a 32% decrease from 2010. However, the 2011 managed deer hunt totals were fairly similar (2% decrease) to 2009's total of 1,842. The 2011 managed deer hunts harvest consisted of 431 antlered bucks, 304 button bucks, and 1,065 does.

2011-12 Deer Harvest Composition by Season & Portion

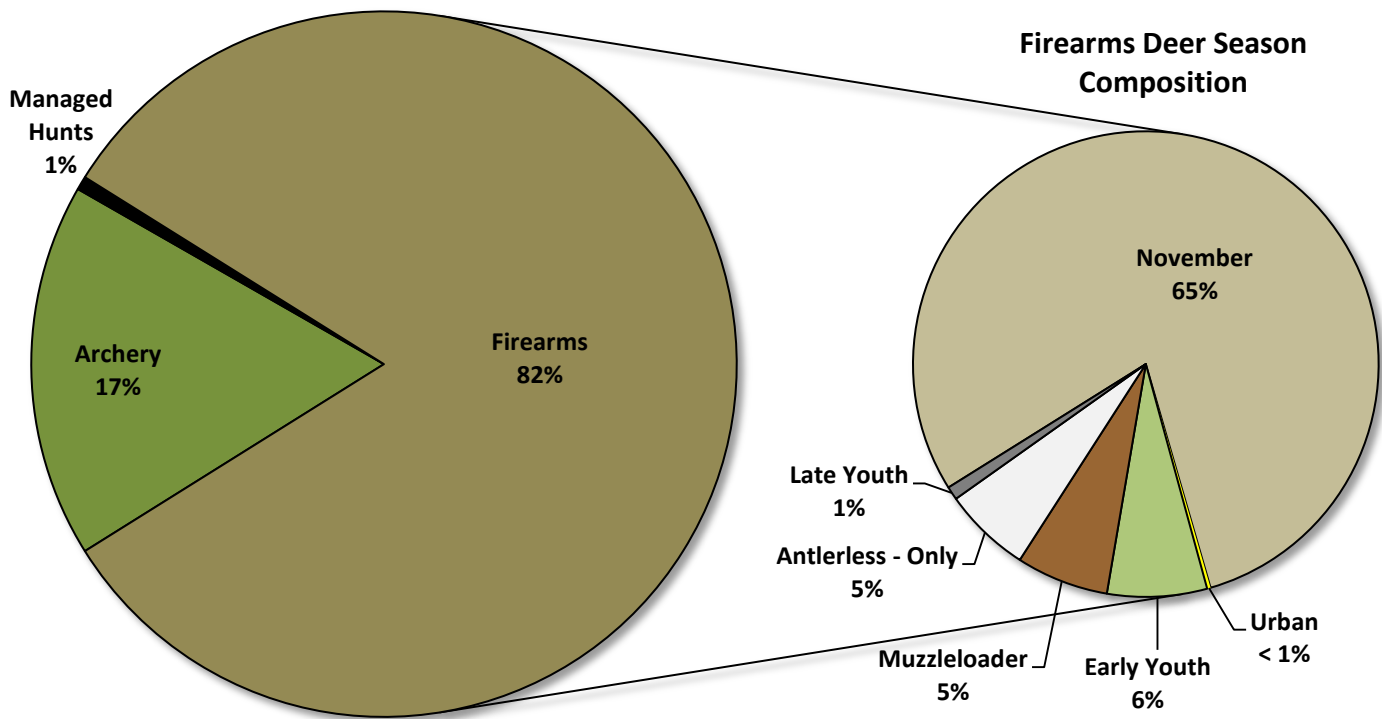


Figure 10. Deer harvest totals for 2011-12 composed by season and firearms season composed by portion totals.

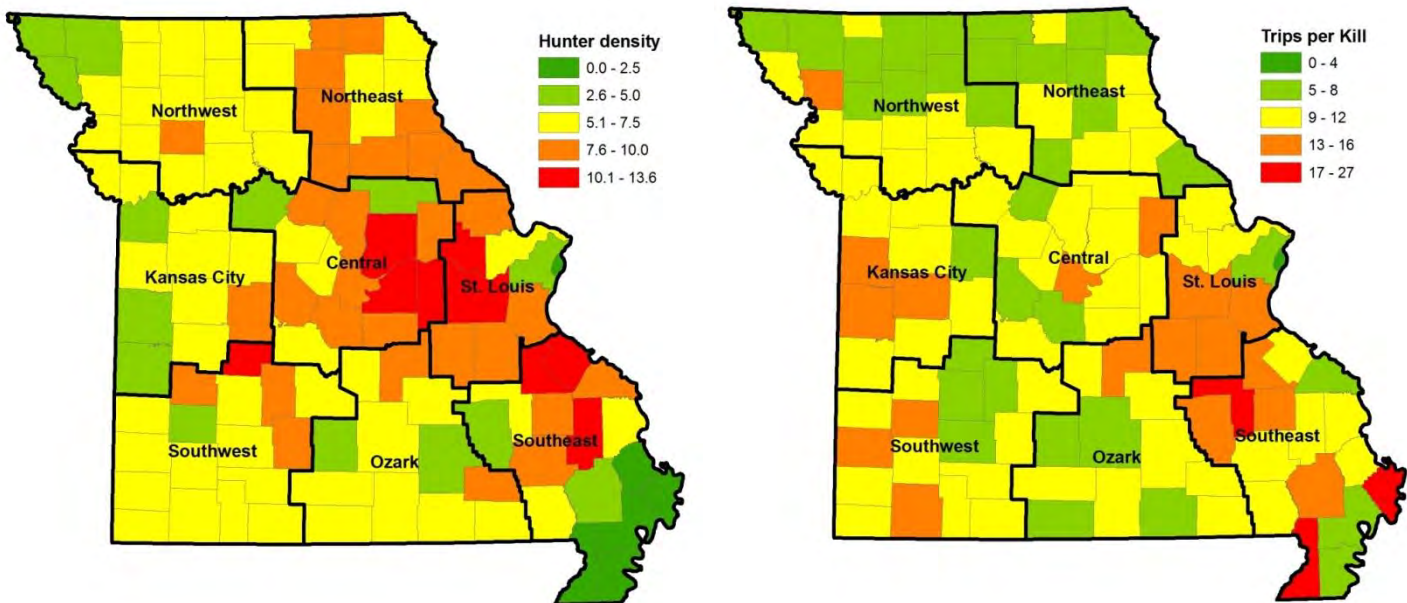


Figure 11. Number of firearms deer hunters per square mile and number of trips per kill estimated using the 2010 post season firearms deer hunter survey.

Table 1. Deer Season Harvest Summary

Season/Portion	Antlered Deer			Button Bucks			Does			Total		
	2010	2011	% Diff	2010	2011	% Diff.	2010	2011	% Diff.	2010	2011	% Diff.
Archery	15,909	17,818	12	4,996	5,863	17	21,467	25,849	20	42,372	49,530	17
Urban	7	5	-29	114	96	-16	465	469	1	586	570	-3
Early Youth	7,929	10,258	29	1,570	1,881	20	3,870	4,299	11	13,369	16,438	23
November	76,962	81,468	6	26,134	25,892	-1	83,648	81,045	-3	186,744	188,405	1
Muzzleloader	2,655	3,400	28	1,941	2,209	14	8,349	9,626	15	12,945	15,235	18
Antlerless - Only	148	153	3	2,987	2,857	-4	12,082	11,410	-6	15,217	14,420	-5
Managed Hunts	727	431	-41	442	304	-31	1,496	1065	-29	2,665	1800	-32
Late Youth	270	498	45	240	370	54	791	1,328	68	1,301	2,196	69
Total Firearms	87,971	95,782	9	32,986	33,305	1	109,205	108,177	-1	230,162	237,264	3
Total	104,607	114,031	9	38,424	39,472	3	132,168	135,091	2	275,199	288,594	5

Table 2. Summary of Permit Sales and Harvest by Permit Type

Permit Type	Number of Permits			Number of Deer Harvested		
	2010	2011	% Diff.	2010	2011	% Diff.
Permittee Archery	100,482	104,160	4	19,315	21,241	10
Landowner Archery	79,964	82,347	3	5,380	6,311	17
Youth Archery	5,880	6,431	9	618	838	36
Permittee Archery Antlerless	43,029	49,132	14	12,231	14,933	22
Landowner Archery Antlerless	123,759	133,844	8	4,318	5,657	31
Youth Archery Antlerless	1,501	1,817	21	228	324	42
Permittee Firearms Any-Deer	294,451	291,890	-1	69,076	71,572	4
Landowner Firearms Any-Deer	175,050	178,975	2	34,480	37,676	9
Youth Firearms Any-Deer	50,062	55,046	10	15,848	18,268	15
Permittee Firearms Antlerless	221,737	219,676	-1	75,213	73,243	-3
Landowner Firearms Antlerless	156,508	157,624	1	28,530	29,002	2
Youth Firearms Antlerless	21,787	23,922	10	6,592	7,268	10
Resident Firearms	891,807	899,020	1	218,659	225,404	3
Nonresident Firearms	27,788	28,445	2	11,080	11,569	4
Resident Archery	345,127	360,109	4	39,033	45,887	18
Nonresident Archery	9,408	9,844	5	3,057	3,391	11
Permittee Archery & Firearms	743,312	752,074	1	199,121	207,632	4
Landowner Archery & Firearms	535,281	552,790	3	72,708	78,619	8

Table 3. Deer Permit and Harvest Facts

	Archery	Firearms	Total ¹
Resident Permittees ¹	104,568	334,752	439,320
Non Resident permittees ¹	7,945	18,380	26,325
Landowners ¹	82,347	178,975	261,322
Total ²	183,013	490,957	511,475
Age Distribution of hunters			
≤ 10	1,393	20,665	-
11-15	10,070	48,859	-
16-40	81,064	182,775	-
≥ 41	90,486	239,657	-
Antlerless permit sales			
1	26,449	148,401	174,850
2	7,329	28,488	35,817
3	1,545	6,615	8,160
≥ 4	1,098	3,988	5,086
Number of deer taken			
0	146,624	307,872	309,740
1	27,489	142,596	145,507
2	6,360	31,585	39,280
3	1,613	6,364	10,855
≥ 4	927	2,540	6,093
Number of antlered deer taken			
0	165,788	395,768	403,838
1	16,674	94,818	102,181
2	547	369	5,219
3	4	2	237
Percentage taking;			
≥ 1 deer	19.88	37.29	39.44
1 deer	15.02	29.04	28.45
2 deer	3.48	6.43	7.68
≥ 3 deer	1.39	1.81	3.31
Percentage taking:			
1 antlered buck	9.11	19.31	19.98
2 antlered bucks	0.30	0.08	1.02
≥ 3 antlered bucks	0.00	0.00	0.05
Percentage of deer taken by nonresidents			
	6.8	4.9	5.2
Percentage of deer taken by landowners			
	24.1	28.1	27.2

¹ Number of any-deer permits issued

² Number of individuals, including nonresidents, possessing a permit, not number of permits issued

Table 4. Archery and Firearms Harvest Totals for the 2011-12 Missouri Deer Season.

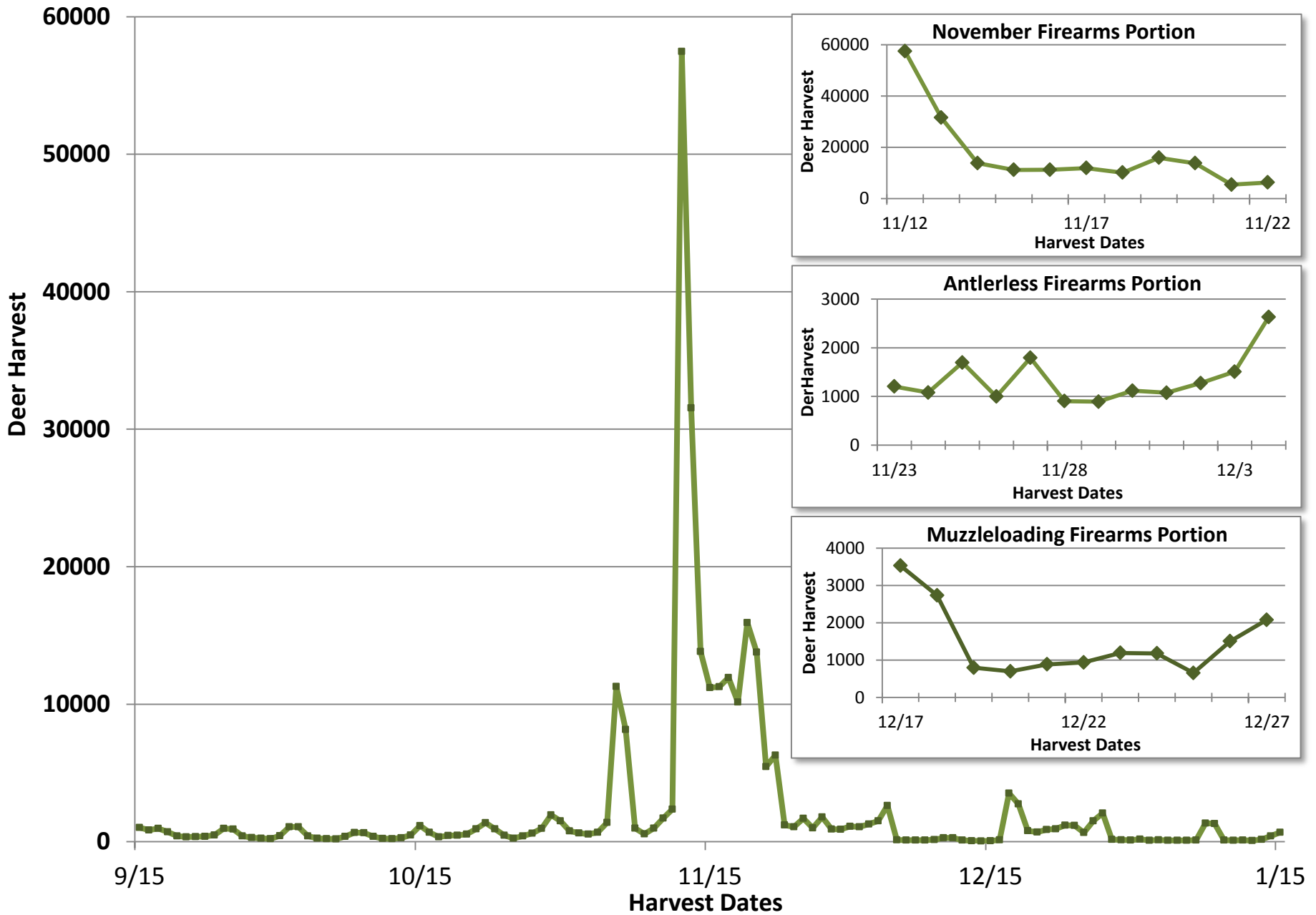
County	Archery				Firearms				Totals			
	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total
Adair	329	80	187	596	1643	523	1068	3234	1972	603	1255	3830
Andrew	115	20	94	229	608	210	631	1449	723	230	725	1678
Atchison	88	22	104	214	416	74	506	996	504	96	610	1210
Audrain	215	61	100	376	1088	393	807	2288	1303	454	907	2664
Barry	204	57	198	459	650	193	902	1745	854	250	1100	2204
Barton	242	33	137	412	696	202	702	1600	938	235	839	2012
Bates	162	28	86	276	985	272	700	1957	1147	300	786	2233
Benton	334	86	225	645	1909	627	1376	3912	2243	713	1601	4557
Bollinger	334	79	210	623	1066	325	1243	2634	1400	404	1453	3257
Boone	404	93	217	714	1327	415	1043	2785	1731	508	1260	3499
Buchanan	71	21	55	147	443	117	389	949	514	138	444	1096
Butler	161	36	175	372	538	152	542	1232	699	188	717	1604
Caldwell	112	15	80	207	727	193	745	1665	839	208	825	1872
Callaway	447	90	223	760	2017	664	1532	4213	2464	754	1755	4973
Camden	381	89	231	701	1444	450	885	2779	1825	539	1116	3480
Cape Girardeau	268	65	143	476	652	181	908	1741	920	246	1051	2217
Carroll	152	19	102	273	969	276	979	2224	1121	295	1081	2497
Carter	131	39	176	346	453	157	608	1218	584	196	784	1564
Cass	181	55	131	367	835	253	836	1924	1016	308	967	2291
Cedar	156	40	120	316	1071	319	763	2153	1227	359	883	2469
Chariton	149	28	105	282	968	256	826	2050	1117	284	931	2332
Christian	213	44	163	420	533	164	637	1334	746	208	800	1754
Clark	232	45	182	459	1159	358	897	2414	1391	403	1079	2873
Clay	367	76	212	655	410	97	469	976	777	173	681	1631
Clinton	76	13	64	153	495	152	441	1088	571	165	505	1241
Cole	130	37	87	254	687	232	500	1419	817	269	587	1673
Cooper	181	52	112	345	1114	329	851	2294	1295	381	963	2639
Crawford	251	61	239	551	1028	290	1206	2524	1279	351	1445	3075
Dade	101	18	86	205	386	162	648	1196	487	180	734	1401
Dallas	222	42	178	442	1031	324	864	2219	1253	366	1042	2661
Daviess	240	28	141	409	1120	333	1005	2458	1360	361	1146	2867
Dekalb	81	13	69	163	600	177	605	1382	681	190	674	1545

County	Archery				Firearms				Totals			
	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total
Dent	182	69	132	383	1096	324	1024	2444	1278	393	1156	2827
Douglas	208	44	157	409	962	284	1097	2343	1170	328	1254	2752
Dunklin	62	6	45	113	103	29	151	283	165	35	196	396
Franklin	486	125	274	885	1716	547	1460	3723	2202	672	1734	4608
Gasconade	282	66	167	515	1463	486	1077	3026	1745	552	1244	3541
Gentry	143	20	135	298	878	220	814	1912	1021	240	949	2210
Greene	291	70	254	615	806	200	696	1702	1097	270	950	2317
Grundy	139	23	95	257	718	196	628	1542	857	219	723	1799
Harrison	256	45	244	545	1323	383	1276	2982	1579	428	1520	3527
Henry	281	80	129	490	1566	493	1021	3080	1847	573	1150	3570
Hickory	187	59	122	368	1220	378	792	2390	1407	437	914	2758
Holt	131	15	94	240	541	122	576	1239	672	137	670	1479
Howard	174	37	130	341	983	238	861	2082	1157	275	991	2423
Howell	330	77	288	695	1868	607	1600	4075	2198	684	1888	4770
Iron	47	12	59	118	302	113	411	826	349	125	470	944
Jackson	534	116	361	1011	462	116	486	1064	996	232	847	2075
Jasper	277	43	248	568	630	195	1013	1838	907	238	1261	2406
Jefferson	565	136	276	977	1257	400	1046	2703	1822	536	1322	3680
Johnson	246	39	124	409	1078	395	916	2389	1324	434	1040	2798
Knox	294	67	191	552	1415	484	1019	2918	1709	551	1210	3470
Laclede	231	79	227	537	1252	442	1097	2791	1483	521	1324	3328
Lafayette	92	24	49	165	574	181	502	1257	666	205	551	1422
Lawrence	176	28	172	376	448	148	694	1290	624	176	866	1666
Lewis	169	41	124	334	1071	356	863	2290	1240	397	987	2624
Lincoln	355	104	205	664	1460	479	1206	3145	1815	583	1411	3809
Linn	345	62	188	595	1360	379	1050	2789	1705	441	1238	3384
Livingston	156	26	113	295	851	277	791	1919	1007	303	904	2214
Macon	450	108	249	807	2056	626	1589	4271	2506	734	1838	5078
Madison	137	41	91	269	371	152	575	1098	508	193	666	1367
Maries	173	53	112	338	880	303	698	1881	1053	356	810	2219
Marion	171	45	101	317	923	312	730	1965	1094	357	831	2282
McDonald	169	33	194	396	500	131	738	1369	669	164	932	1765
Mercer	238	51	214	503	970	259	882	2111	1208	310	1096	2614

County	Archery				Firearms				Totals			
	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total
Miller	248	55	118	421	1214	405	753	2372	1462	460	871	2793
Mississippi	21	1	19	41	38	15	168	221	59	16	187	262
Moniteau	103	26	59	188	647	201	511	1359	750	227	570	1547
Monroe	313	69	154	536	1429	528	1048	3005	1742	597	1202	3541
Montgomery	236	48	128	412	1266	448	1008	2722	1502	496	1136	3134
Morgan	340	70	176	586	1662	497	1147	3306	2002	567	1323	3892
New Madrid	39	3	27	69	55	17	162	234	94	20	189	303
Newton	240	40	247	527	625	176	844	1645	865	216	1091	2172
Nodaway	202	29	223	454	1263	297	1264	2824	1465	326	1487	3278
Oregon	273	64	245	582	1675	476	1173	3324	1948	540	1418	3906
Osage	377	89	224	690	1822	519	1391	3732	2199	608	1615	4422
Ozark	236	58	165	459	883	255	1121	2259	1119	313	1286	2718
Pemiscot	13	4	11	28	26	4	58	88	39	8	69	116
Perry	201	27	112	340	978	286	912	2176	1179	313	1024	2516
Pettis	233	46	118	397	1294	394	969	2657	1527	440	1087	3054
Phelps	219	53	147	419	835	272	721	1828	1054	325	868	2247
Pike	405	106	216	727	1841	660	1408	3909	2246	766	1624	4636
Platte	361	67	177	605	441	116	451	1008	802	183	628	1613
Polk	173	41	144	358	639	196	955	1790	812	237	1099	2148
Pulaski	197	51	136	384	591	212	556	1359	788	263	692	1743
Putnam	373	61	245	679	1314	349	1058	2721	1687	410	1303	3400
Ralls	213	42	105	360	1107	336	839	2282	1320	378	944	2642
Randolph	249	48	123	420	1273	400	886	2559	1522	448	1009	2979
Ray	117	31	89	237	782	208	753	1743	899	239	842	1980
Reynolds	96	29	116	241	503	166	592	1261	599	195	708	1502
Ripley	273	92	185	550	1095	325	898	2318	1368	417	1083	2868
Saint Charles	291	83	223	597	777	178	758	1713	1068	261	981	2310
Saint Clair	280	78	153	511	1647	534	1026	3207	1927	612	1179	3718
Saint Francois	205	68	130	403	574	187	649	1410	779	255	779	1813
Saint Louis	549	108	319	976	361	90	322	773	910	198	641	1749
Sainte Genevieve	234	41	71	346	1070	314	689	2073	1304	355	760	2419
Saline	143	24	71	238	782	225	701	1708	925	249	772	1946
Schuyler	145	27	102	274	878	289	603	1770	1023	316	705	2044

County	Archery				Firearms				Totals			
	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total	Doe	Button Buck	Antlered Buck	Total
Scotland	332	63	227	622	1480	505	1010	2995	1812	568	1237	3617
Scott	55	13	43	111	202	59	241	502	257	72	284	613
Shannon	172	46	167	385	892	218	839	1949	1064	264	1006	2334
Shelby	297	80	175	552	1351	429	943	2723	1648	509	1118	3275
Stoddard	260	88	204	552	516	193	558	1267	776	281	762	1819
Stone	118	24	123	265	439	152	588	1179	557	176	711	1444
Sullivan	297	57	220	574	1417	419	1058	2894	1714	476	1278	3468
Taney	206	44	206	456	666	223	874	1763	872	267	1080	2219
Texas	276	68	265	609	1570	463	1722	3755	1846	531	1987	4364
Vernon	307	49	156	512	1428	459	946	2833	1735	508	1102	3345
Warren	209	59	139	407	924	313	771	2008	1133	372	910	2415
Washington	147	54	112	313	679	253	828	1760	826	307	940	2073
Wayne	390	107	277	774	1074	366	1200	2640	1464	473	1477	3414
Webster	187	45	202	434	739	216	911	1866	926	261	1113	2300
Worth	90	14	137	241	467	124	506	1097	557	138	643	1338
Wright	201	44	191	436	775	213	900	1888	976	257	1091	2324
Northwest	2901	495	2346	5742	15499	4253	14667	34419	18400	4748	17013	40161
Northeast	4269	939	2601	7809	20357	6574	15019	41950	24626	7513	17620	49759
Kansas City	3378	744	1921	6043	12629	3937	9698	26264	16007	4681	11619	32307
Central	3834	890	2155	6879	18396	5805	13765	37966	22230	6695	15920	44845
St. Louis	2853	730	1787	5370	8208	2550	7597	18349	11061	3280	9384	23719
Southwest	3393	740	3021	7154	12331	3821	13718	29870	15724	4561	16739	37024
Ozark	2698	705	2254	5657	12695	3806	12259	28760	15393	4511	14513	34417
Southeast	2523	620	1733	4876	8068	2559	9059	19686	10591	3179	10792	24562
GRAND TOTAL	25849	5863	17818	49530	108177	33305	95782	237264	134026	39168	113600	286794

2011-12 Daily Harvest Total



Regional Deer Harvest Trends

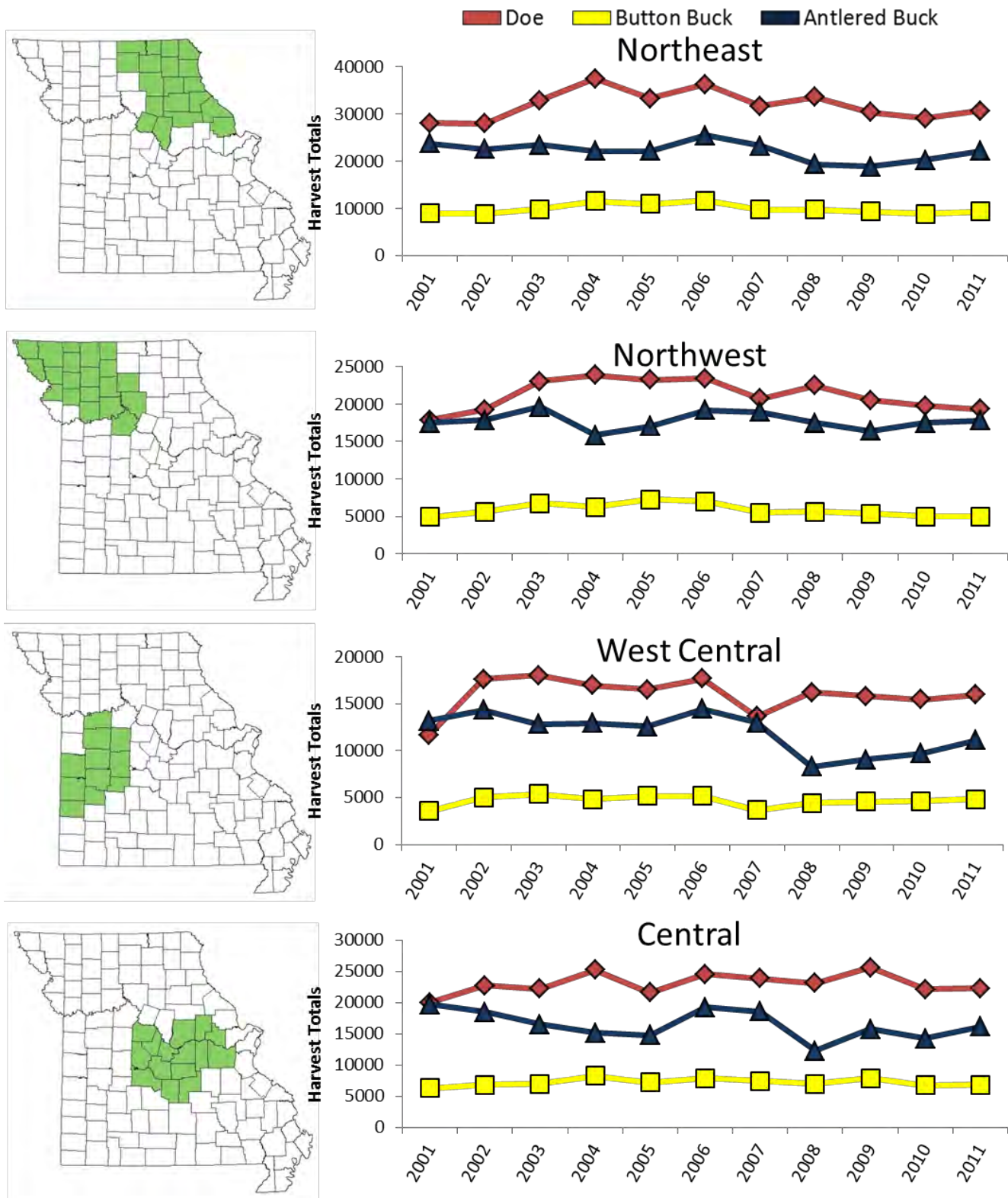


Figure 12. Doe, button buck, and antlered deer harvest totals for Northeast, Northwest, West Central, and Central regions in Missouri during 2001 to 2011.

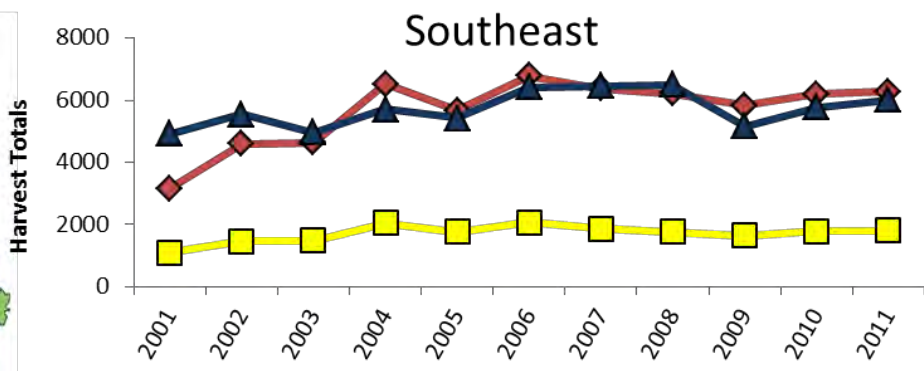
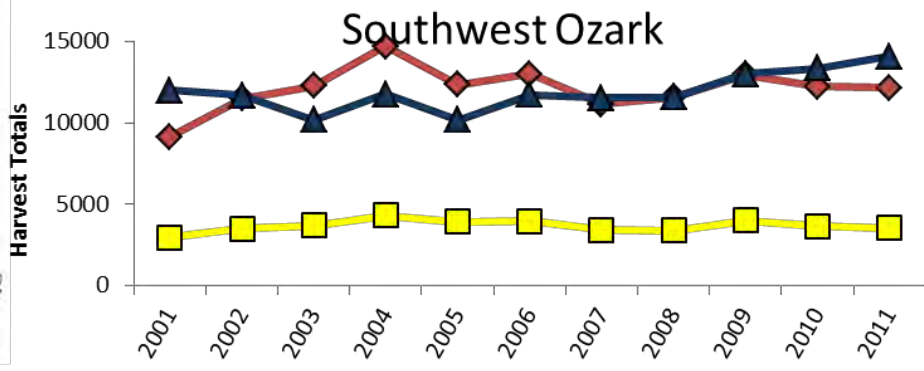
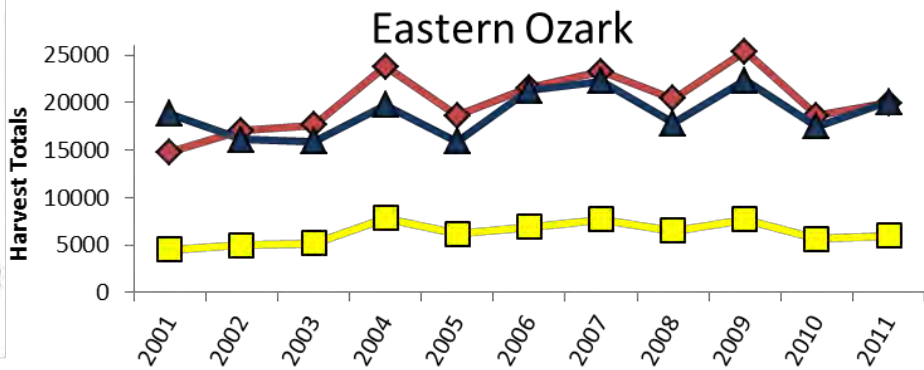
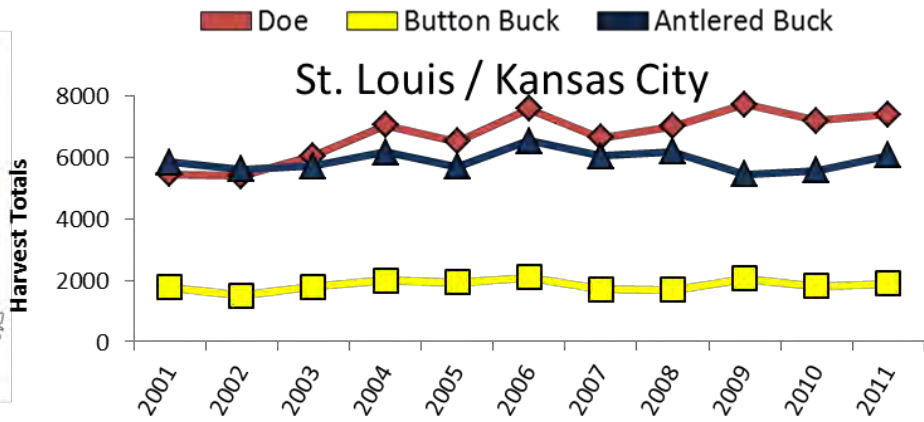


Figure 12 Continued. Doe, button buck, and antlered deer harvest totals for St. Louis / Kansas City, Eastern Ozark, Southwest Ozark, and Southeast regions in Missouri during 2001 to 2011.

Deer Management Information & Assistance

Deer Information Tailored to Hunters & Landowners

The University of Missouri (MU) Extension and Missouri Department of Conservation are collaborating on a publication series devoted solely to deer management. This information is intended for landowners, hunters, and wildlife enthusiasts that want to learn more about deer and managing deer in Missouri.

The publication series includes a wide variety of science-based information about deer management that will help landowners and hunters better manage deer. Several publications explain how to obtain population information, such as sex ratio, density, fawn recruitment, and age structure. Topics also include information on deer biology, including antler growth, ecology, and aging deer “on the hoof” and by jawbones



These publications are free to the public and available on MU Extension’s website (<http://extension.missouri.edu/main/DisplayCategory.aspx?C=82>). As of March 2012, there are 10 publications available, with several more being constantly added to provide new and diverse deer management information.

Deer Cooperative Assistance

Missouri is fortunate to have regulations set by county, instead of large regions like many other states, as this allows regulations to be customized to specific deer population demographics and land use within an area. However, deer populations can still vary within a county, meaning that county regulations might not be best suited for all areas within a county. Therefore, a more localized approach to deer management might be necessary for landowners and hunters to achieve their deer management goals. A great way to produce significant results is by establishing a cooperative, which is simply an organized group of neighbors that work collectively to achieve similar management goals through habitat improvement, harvest management and education. Many cooperatives are focused on deer management, but not necessarily, as goals can be based on any wildlife (turkey, quail, non-game, etc.) or habitat goal.



Cuivre River Coop Sign.



Big Buffalo Creek Landowner Coop getting ready for a prescribed burn.

Cooperatives are managed and operated solely by their members; however, MDC is often willing to assist. For example, in some situations MDC may be able to provide development assistance, presentations and workshops for members on topics important to the cooperative’s goals, and any other education and technical guidance, so the cooperative can best achieve their management goals.

Private Land Conservationists (PLC) provide assistance to landowners interested in developing cooperatives in their area. Find your local PLC by searching “Who’s My Local Contact?” at <http://mdc.mo.gov>

Deer Program Research Projects

Deer density and habitat conditions affect reproductive parameters like fetal rates, conception rates, and age at first reproduction. The impact of nutrition on reproductive parameters is well known. Does maintained on a high-quality diet produced more fawns and bred at younger ages than does nutritionally and socially stressed. We have assumed that in heavily agricultural areas with an abundance of food and where deer populations are maintained at levels below biological carrying capacity that reproductive rates would not vary greatly. However, in previous studies conducted by the Missouri Department of Conservation, fawn conception rates in the Glaciated Plains (Figure 7.), the most fertile region of the state, declined from 70% in the 1950's to 34% in the 1990's. Antler characteristics (number of points, antler beam circumference) of yearling bucks also deteriorated over this same time period. Due to lower body fat and higher energy requirements fawns, are more sensitive to changes in social stress and resource availability than yearling and adult does. Declining fawn reproduction and yearling buck antler development occurred during a period of rapid growth in the size of the Missouri deer population. The decline in fawn reproductive rates suggests a density dependent relationship.

Deer populations across the state have steadily increased since the last evaluation of female reproduction in the early 1990's. Population simulations suggest that there were 1 million deer in Missouri in 1993 and 1.4 million today. If density-dependent processes are impacting deer populations in Missouri we would expect to see a change in reproductive rates since the last survey in 1993.

In an effort to evaluate female white-tailed deer reproductive characteristic we conducted field survey of reproductive status of female deer collected during the winter 2012 CWD sample collection effort in Linn and Macon counties. We detected pregnancy in 95% of adult does (> 2 years old), 47% of yearling does (>1 year old and < 2 years old), and 0% in does fawns (> 1 year old). Adult does averaged 1.8 fetuses per doe while yearling does averaged 1.6 fetuses per doe. Despite the decline in fawn pregnancy rate, body condition and reproduction in adult does doesn't appear to be affected. In addition to determining reproductive rates we estimated date of conception (Figure 13). Median date of conception was estimated to be November 11th.

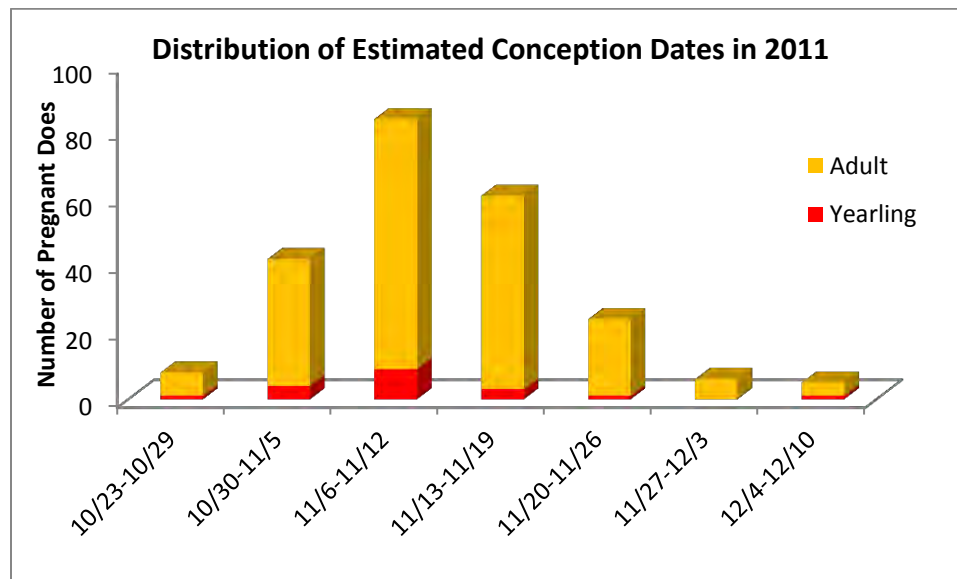


Figure 13. Distribution of estimated conceptions dates from female white-tailed deer collected in February and March of 2012 in Linn and Macon counties.



Missouri Department of Conservation

NEBRASKA DEER STATUS REPORT

2012 Midwest Deer & Wild Turkey Group

Blue Bell Lodge
Custer, South Dakota
October 16-19, 2012

Submitted by the State of Nebraska
Nebraska Game and Parks Commission - Wildlife Division
Big Game Program Manager: Kit Hams

Collection and Analysis of Deer Harvest Data - 2011

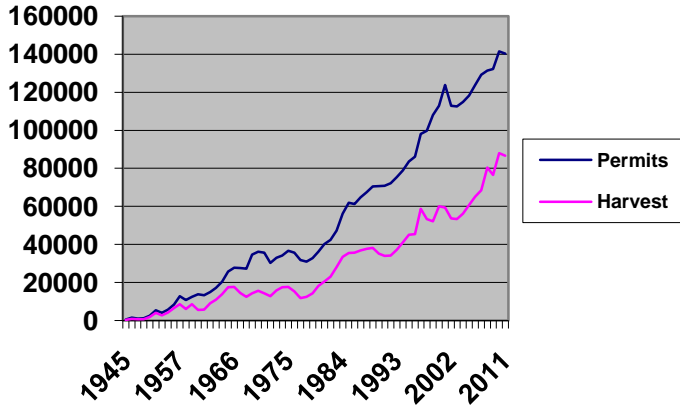
Project Objective: To gather information related to the status, distribution, and abundance of wildlife populations in Nebraska, and to develop effective management practices and programs for these species.



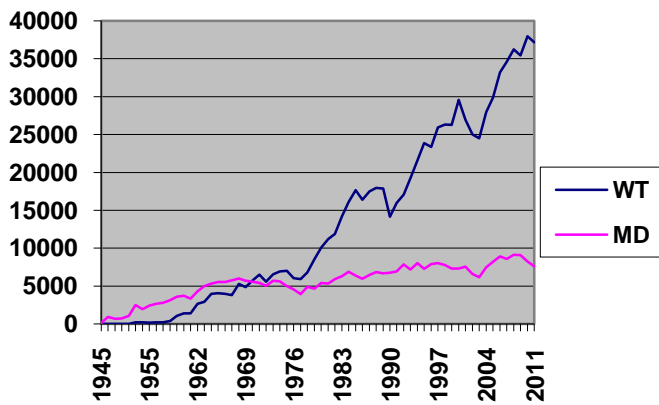
Nebraska 2011 Deer Season Summary



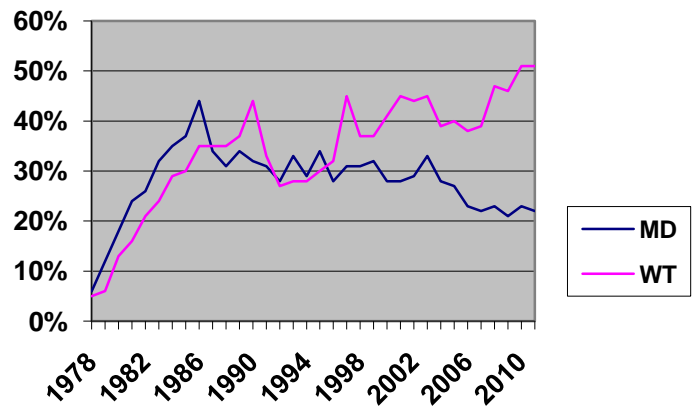
Deer Permits & Harvest 1945-2011



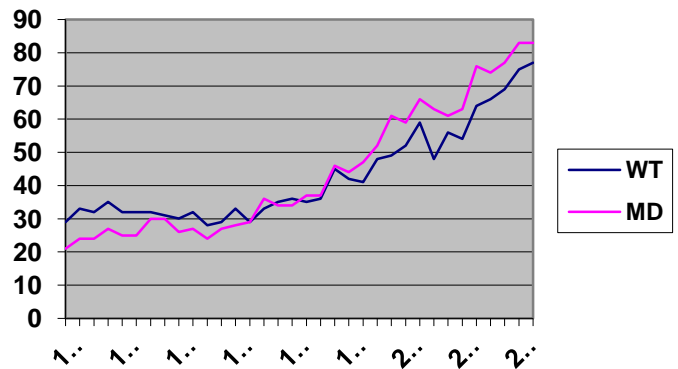
Buck Harvest 1945-2011



% Antlerless of Total Harvest 1978-2011



Age of Bucks - % Age 2+ (1978-2011)



2011 Seasons	Days	Dates	Permits	Whitetail Antlerless	
				Kill	% Ales
Nov. Firearm	9 days	Nov. 12 – 20	29,938	5,214	17%
Nov. Earn-A-Buck	11 days	Nov. 12 – 22	17,897	10,455	58%
WT Statewide Buck	108 days	Sept. 15 – Dec. 31	8,144	1,404	17%
SCA Antlerless	126 days	Sept. 15 – Jan. 18	24,673	10,436	42%

Archery	99 days	Sept. 15 – Dec. 31	16,413	2,913	18%
Landowner	126 days	Sept. 15 – Jan. 18	13,428	2,350	18%
Muzzleloader	31 days	Dec. 1-31	10,389	1,982	19%
Youth	126 days	Sept. 15 – Jan. 18	12,551	2,871	25%
October Antlerless	10 days	Oct. 1 – 10	4,177	1,546	37%

2011 Season Highlights

Permits Issued: 140,350 permits sold

127,345 bonus antlerless WT tags	104,793 either sex permits
24,673 antlerless only permits	10,884 buck only permits

2011 Season Highlights continued:

Harvest: 86,609 deer

37,160 WT bucks and 39,283 WT antlerless (record)
7,585 MD buck and 2,114 MD antlerless

October Antlerless firearm: (3rd year) 10 days, 60% of state; \$11 permit, 4,177 permits sold
Bag Limit: 2 antlerless whitetail; Kill = 1,560 antlerless WT
Less popular in 2011 (Sales down 42%)

Earn-A-Buck: Expanded to 5 eastern units: 17,900 total permits
Hunter complaints against EAB increased in 2011
58% of permit holders took antlerless deer vs. 17% in non EAB units

Deer Exchange: Participation averages 1,000 per year 1,700 in 2009; 900 in 2008
Persons sign up to donate or receive deer on the NGPC website
\$0 cost to NGPC

HHH - Hunters Helping the Hungry:

Program mandated by statute, new in 2012 and funded by donations
Enough funds collected to process 350 deer in 2012 (\$80 per deer)

Antlerless Deer Hunter Program:

Good hunter interest, but landowner participation is low
Staff gives hunter lists to landowners who complain of damage

\$5 Youth deer permits for resident and nonresident youth age 12-15:

8% increase in sales
12,551 permits issued (10% to nonresidents)
Bag Limit: 1 any deer and 1 Antlerless WT (one permit limit)
Nonresident youth restricted from taking mule deer in three 3 units

2012 Season Changes / Issues:

Earn-A-Buck: Dropped after two years due to increased hunter complaints

EHD and historic drought:

5,000 + suspect EHD whitetail mortalities from all regions except SW Nebraska
60% of reports from north east and north central units (20% of state)
Not affecting mule deer
Drought - worst on record – Expect record damage complaints

Mule deer: Buck harvest down 17% in two years. Some units down 40-60%.
Meningeal worm is the likely cause. EHD may benefit mule deer if WT mortality is high.

CWD: 1,500 samples scheduled.

Big Game Wildlife Surveys and Inventories

General Objectives: To gather data relating to the demographic characteristics and distribution of big game species populations in Nebraska that will inform the development of management strategies for each species.

Project Leaders: Kit Hams, Big Game Program Manager, Lincoln
Bruce Trindle, Big Game Research Specialist, Lincoln

Job A1: Inventories of Deer (B. Trindle)

Project: Winter Mule Deer Survey

Objectives: The purpose of the Mule Deer Survey is to obtain sex and age classifications for use in management recommendations.

Activity: Personnel from wildlife management and law enforcement classify mule deer as buck, doe or fawns from December 1 to February 15, trying to avoid duplicate observations. Random observations of mule deer are recorded by management unit.

Significant Deviations: Selected personnel are asked to classify and record observations of mule deer by management unit. It appears that, unlike states to the west of Nebraska, mule deer do not have specific wintering areas, but are more likely to be distributed by available food sources in western Nebraska. We therefore were unable to concentrate observations on a few small areas within some management units, but rather collected observations of smaller numbers of deer dispersed throughout the survey area.

Results: Observers classified 4,110 mule deer for a statewide buck:doe ratio of 0.29 and fawn:doe ratio of 0.83 in the winter of 2010–2011. This compares to observers classifying 2,666 mule deer for a statewide buck:doe ratio of 0.25 and fawn:doe ratio of 0.78 in the winter of 2009–2010. Results are presented by district (Table 1), and data from 2009–2010 is provided for comparison (Table 2). Our mule deer management goal for post-harvest buck:doe ratio is 0.30 for units with at least 200 observations.

Figure 1. Units meeting the post harvest management goal buck:doe ratio of 0.30.

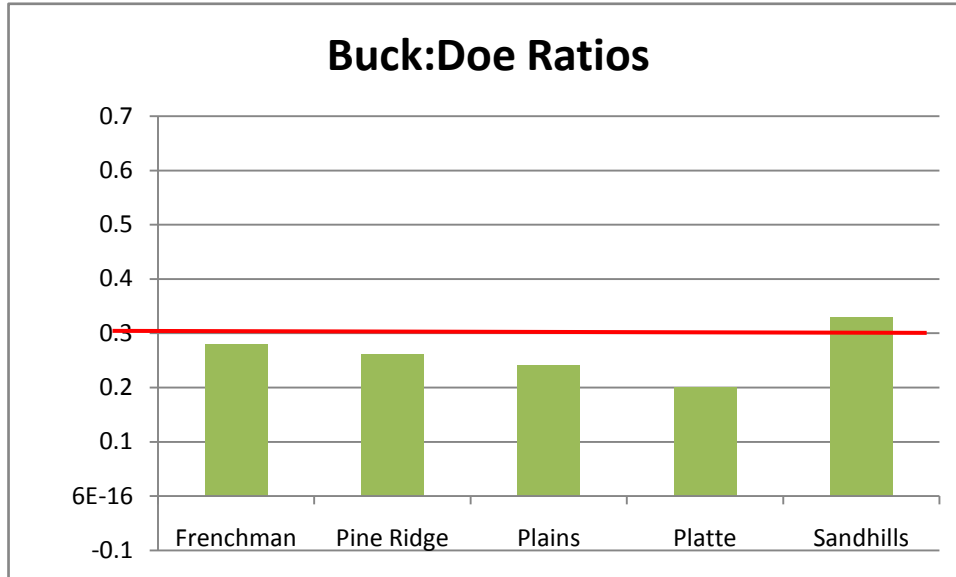


Table 1. Sex and Age Classification by District – 2010-2011.

Unit*	Bucks	Does	Fawns	Unk	Total	Buck:Doe	Fawn:Doe
District 1							
PR	99	386	311	179	975	0.26	0.81
PL	56	235	175	4	470	0.24	0.74
UP	14	74	63	0	151	0.19	0.85
District 2							
CW	9	15	8	7	39	0.60	0.53
KP	20	57	41	0	118	0.35	0.72
LW	3	8	9	0	20	0.38	1.13
SH	69	82	80	21	252	0.84	0.98
District 4							
FR	207	752	679	46	1684	0.28	0.90
PT	38	191	134	38	401	0.20	0.70
State	515	1800	1500	295	4110	0.29	0.83

*Units: PR=Pine Ridge, PL=Plains, UP=Upper Platte, CE=Calamus East, CW=Calamus West, KP=Keya Paha, LW=Loup West, SH=Sandhills, FR=Frenchman, PT=Platte

Table 2. Sex and Age Classification by District – 2009-2010.

Unit*	Bucks	Does	Fawns	Unk	Total	Buck:Doe	Fawn:Doe
District 1							
PR	56	272	283	25	635	0.21	1.04
PL	32	170	94	3	299	0.19	0.55
UP	32	163	105	0	300	0.20	0.64
District 2							
CE	0	4	2	0	6	0.00	0.50
CW	8	33	23	20	84	0.24	0.70
KP	21	49	39	0	109	0.43	0.80
LW	5	15	15	0	35	0.33	1.00
SH	77	234	179	90	580	0.33	0.76
District 4							
FR	37	135	118	23	313	0.27	0.87
PT	---	---	---	---	---	---	---
District 6							
BUF	24	77	51	76	228	0.31	0.66
REP	3	46	27	0	77	0.07	0.59
State	295	1198	936	237	2666	0.25	0.78

*Units: PR=Pine Ridge, PL=Plains, UP=Upper Platte, CE=Calamus East, CW=Calamus West, KP=Keya Paha, LW=Loup West, SH=Sandhills, FR=Frenchman, PT=Platte, BUF=Buffalo, REP=Republican

Discussion: Both the buck:doe and doe:fawn ratios observed for this year in each district appear to be within an acceptable range, but most units fell below our buck:doe ratio goal of 0.30. The addition of random observations by management unit gave managers more information to monitor mule deer herds within their districts.

Recommendations: Observers should expend enough effort to classify as many deer as possible for each management unit. A minimum sample size of 200 observations per management unit is recommended. Units that do not meet the recommended number of observations should be reevaluated regarding the probability of meeting sample size goals in future years. If probabilities are low, we should consider dropping the units from the survey.

Project: Deer vehicle accident survey

Objectives: Record motor vehicle accidents involving deer.

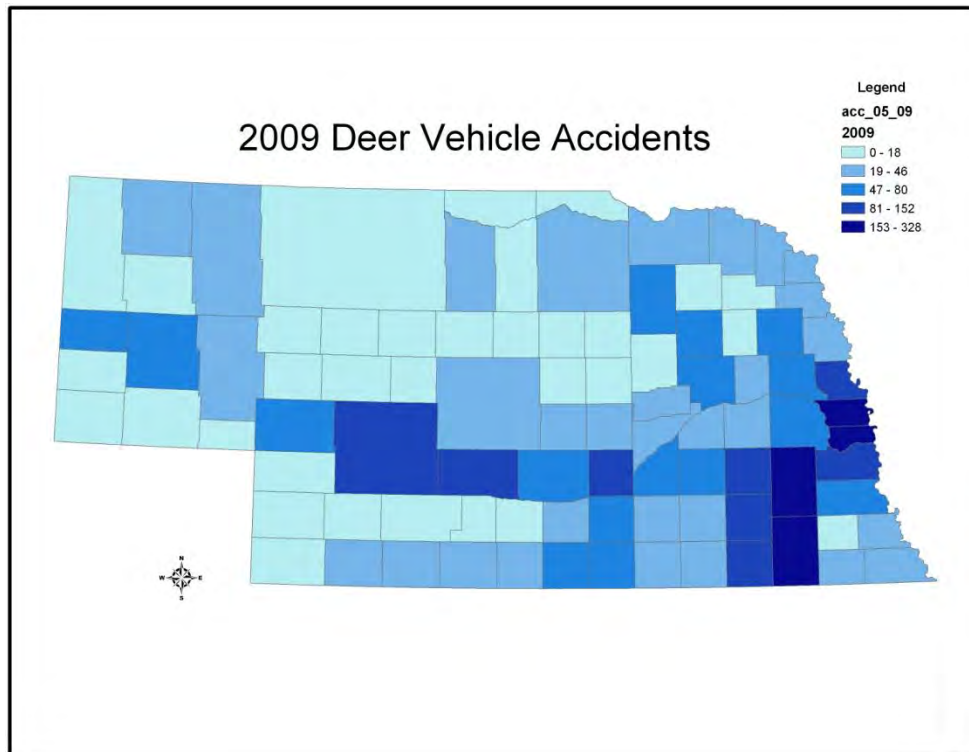
Activity: The Highway Safety – Traffic Engineering Division of the Nebraska Department of Roads records motor vehicle accidents involving deer that are investigated by law enforcement personnel. A summary report is provided each year.

Significant Deviations: None.

Results: The Highway Safety – Traffic Engineering Division of the Nebraska Department of Roads reported a total of 4,095 deer – vehicle collisions for 2009.

Table 1. Recorded deer vehicle accidents, 2001–2009.

<i>YEAR</i>	<i>Accidents</i>
2001	3,653
2002	3,924
2003	3,951
2004	3,691
2005	3,425
2006	3,041
2007	2,998
2008	3,719
2009	4,095



Discussion: The increase in deer vehicle collisions may indicate a deer population that is above target level.

Recommendations: This survey should be compiled again next year because the standardized approach allows it to be compared from year to year and can be considered marginally useful as a deer population index.

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 2012, approximately 100 Commission personnel aged 15,250 deer (33% of total buck harvest) and collected tissue samples from 1,565 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,” a telephone and web-based harvest registration system, is used for all deer harvested outside the November firearm deer season. A total of 22,162 deer were checked (10,333 phone, 11,929 by Internet). The proportion of hunters checking deer by Telecheck increased to 32%. Cost savings to the agency was approximately \$10,000.

Table 1. Deer Check 2009-2011

Year	Total Harvest	Telecheck	by Phone	by Internet	by Check Station
2009	76,613	12,535	5%	11%	84%
2010	88,034	24,351	12%	16%	72%
2011	86,609	22,162	12%	14%	74%

Significant Deviations: None

Results: The 2011 deer season allowed 126 days of hunting from September 15 – January 18. Archery season was September 15 - December 31; muzzleloader season was December 1-31; firearm season was November 12-20; Earn-A-Buck season was Nov. 12-22; January antlerless season was December 26 – January 18; October Antlerless season was October 1-10.

Total deer permit sales deer hunters increased to 140,350 permits, which is a 1% decrease below last year’s record sales. Total deer harvest was 86,609, a 2% decrease from the previous year’s record harvest.

Total mule deer harvest was 9,699, 10% lower than in 2010. Harvest has ranged from 9,155 to 11,787 for the past 25 years. Mule deer buck harvest was 7,585, the lowest since 2004. Mule deer antlerless harvest was the lowest in 30 years, reflecting our goal to increase mule deer populations.

Whitetail buck harvest was the 2nd highest on record (37,160) and whitetail antlerless was the highest on record (39,283). This is the second year that antlerless kill exceeded buck kill.

November Firearm Season - Results of the November firearm season (Table 2) are shown for the 18 deer management units (Figure 1) and four statewide permits. Total harvest for the past five years is in Table 3.

Table 2. 2011 November firearm season, permits, harvest, and success (ES = either sex, AO = antlerless only, BO = buck only, WT = whitetail, MD = mule deer).

Units	Permits Issued	Bag Limits	Adult Buck Harvest		Antlerless Harvest		Total Kill	% Success	% Age 1 Bucks	
			MD	WT	MD	WT			MD	WT
Blue NW EAB	2700	1ES,1AO	0	908	0	1592	2519	93%		30%
Blue SE EAB	3900	1ES,1AO	0	1253	3	2175	3490	89%		27%
Buffalo MD	1700	ES	349	547	48	75	1022	60%	24%	23%
Buffalo WT	1750	1ESWT	4	850	0	138	996	57%		20%
Calamus E	1300	1ES ³ ,1AOWT	44	675	0	307	1029	79%	14%	28%
Calamus W	1800	1ES,1AOWT	223	768	60	314	1366	76%	7%	18%
Elkhorn EAB	3600	1ES,1AO	2	1244	5	2001	3279	91%		36%
Frenchman MD	1884	1ES,1AOWT	915	317	59	291	1585	84%	15%	14%
Frenchman WT	1600	1WT,1AOWT	5	806	0	433	1248	78%		18%
Keya Paha	2300	1ES ³ ,1AOWT	128	1369	3	554	2055	89%	4%	14%
Loup East	2400	1ES ³ ,1AOWT	22	1205	3	613	1846	77%		28%
Loup West	1700	1ES,1AOWT	313	670	72	420	1484	87%	25%	21%
Missouri EAB	3200	1ES ³ ,1AOWT	23	1474	1	2013	3531	110%		19%
Pine Ridge	2800	1ES	521	915	82	131	1707	61%	17%	17%
Plains	1500	1ES	546	342	94	54	1046	70%	17%	14%
Platte MD	1200	1ES,1AOWT	418	234	34	177	868	72%	23%	25%
Platte WT	1309	1WT,1AOWT	5	522	2	283	819	63%		20%
Republican MD	100	1MD buck	26	7	0	4	37	37%		0%
Repub. WT	3000	1WT,1AOWT	1	1494	0	985	2493	83%		26%
Sandhills	2400	1ES,1AOWT	702	823	71	400	2000	83%	8%	7%
Upper Platte	1200	1ES	445	181	106	35	775	65%	17%	16%
Wahoo EAB	4500	1ES,1AO	1	1711	1	2674	4429	98%		30%
Restricted SWB	2740	Buck ³	245	1011	2	10	1282	47%	12%	18%
WT SWB	8144	1BOWT,1AOWT	10	3184	4	1404	4632	57%		17%
Youth Deer	6924	1ES,1AOWT	1051	2075	158	1473	4779	69%	27%	32%
Youth WT	5627	1WT,1AOWT	31	232	5	1398	3449	62%		32%
Landowner	13428	1ES,1AO	1025	4616	332	2350	8377	62%	13%	22%
TOTALS	84706	--	7055	29433	1145	22304	62143	73%	17%	23%

* Antlerless mule deer prohibited

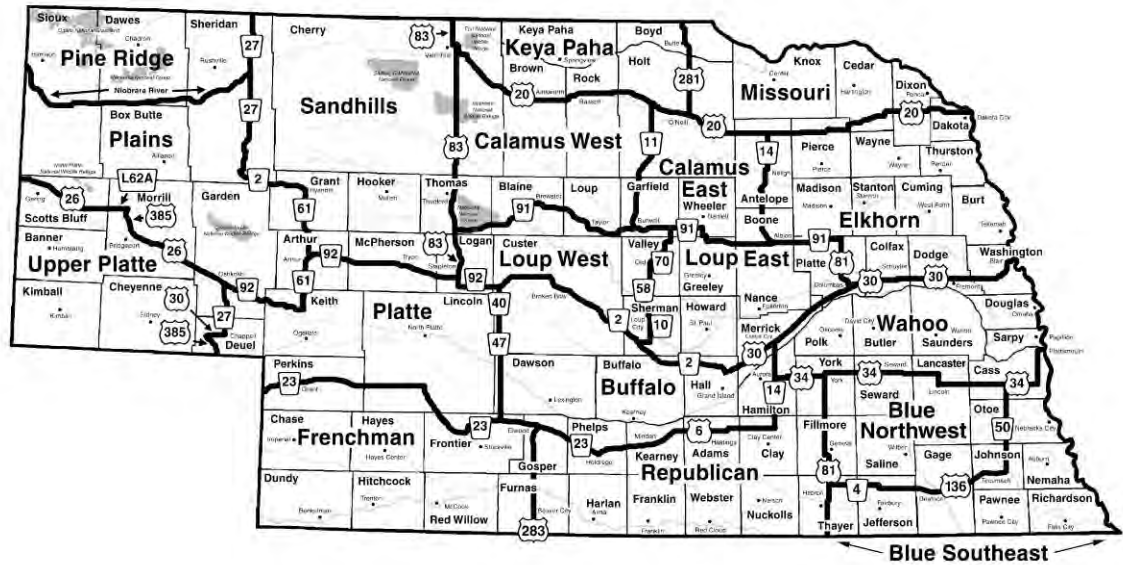
3 = no mule deer allowed in MDCA units (BF, FR, PT, RP)

Table 3. November firearm deer season, 2007-2011.

Year	November Firearm Season		
	Permits	Harvest	% Success
2007	73,169	42,710	58
2008	75,940	50,733	67*
2009	74,347	47,286	64*
2010	81,368	60,642	75*
2011	84,706	62,143	73*

* bonus tags inflate success

Figure 1. 2011 Firearm Deer Management Units



Archery Season – A total of 6,794 deer was taken on 16,413 permits for a 41% success rate. Bonus antlerless whitetail tags (first added in 2008) increase hunter success. Fifty-five percent of the harvest was adult bucks and 98% of the harvest was whitetail deer. Statewide Archery permits were not allowed for mule deer in the Mule Deer Conservation Area in 2011. Results for the past five years are in Table 4.

Table 4. Harvest and success for archery season 2007-2011.

Year	Permits	Adult Male		Antlerless		Total Harvest*	Percent Success	% Antlerless
		MD	WT	MD	WT			
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%
2010	15,609	151	3,349	34	2,781	6,315	40**	45%
2011	16,413	115	3,733	29	2,913	6,794	41**	43%

*includes unknown species.

** Bonus tags inflate success

Muzzleloader Season – A total of 4,047 deer was taken on 10,389 permits, for a success rate of 39%. Much of the antlerless kill occurs due to the addition of bonus antlerless whitetail tags on all permits. Permit sales decreased 10% and harvest decreased 5%. Thirty-nine percent of the harvest was adult bucks and 88% of the harvest was whitetail deer. Statewide Muzzleloader permits were not allowed in the Mule Deer Conservation Area in 2011. Results of the muzzleloader season for the past five years are in Table 5.

Table 5. Harvest and success for muzzleloader season 2007-2011.

Year	Permits	Adult Male		Antlerless		Total Harvest*	% Success	% Antlerless
		MD	WT	MD	WT			
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%
2010	11,484	427	1,587	109	2,129	4,252	37	53%
2011	10,389	350	1,589	126	1,982	4,047	39	52%

* includes unknown species.

Statewide Youth Season – Youth Whitetail only permits were introduced in 2011 and the reduced fee (\$6) Statewide Youth permit was introduced in 2010. Bonus antlerless whitetail tags were included on all permits. The Statewide Youth “Any Deer” permits are now limited to one per youth in an effort to restrict mule deer harvest. 6,924 Youth Any Deer permits and 5,627 Youth WT permits were issued. A total of 8,267 deer were harvested on both Youth permits. Sixty percent of the harvest was adult bucks, and 85% of the harvest was whitetail, compared to 80% the previous year. Harvest details can be found in Table 1 and Table 6.

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. Reduced fees are a hunter recruitment and retention strategy, and based on permit sale increases of 56% it appears successful in hunter recruitment. 90% of youth permits were purchased by residents. It remains to be seen if youth permits aid in hunter retention.

Table 6. Harvest and success for youth deer permits, 2007-2011.

Year	Permits	Adult Male		Antlerless		Total Harvest*	% Success	% Antlerless
		MD	WT	MD	WT			
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%
2010	11,255	1,163	3,768	248	2,842	8,055	72	38%
2011	12,551	1,082	4,107	163	2,871	8,267	66	40%

* 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 (126 days). Twenty-five SCA units were open in 2011. 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 11,757 antlerless deer were harvested in the twenty-five SCA units (Figure 2) on 24,673 permits (Table 7). SCA harvest for the past five years is shown in Table 8.

Figure 2: 2011 SCA deer management units

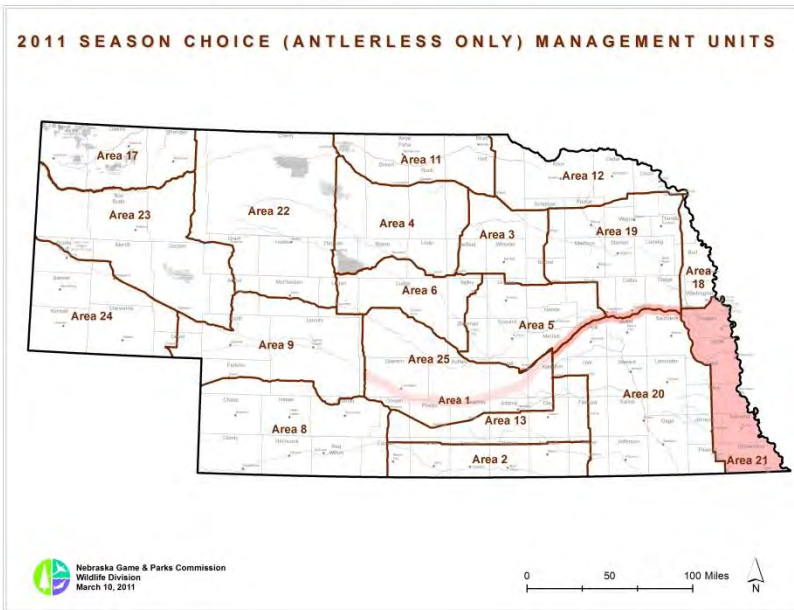


Table 7. Harvest and success for Season Choice Area antlerless seasons, 2011.

Unit	Permits			Harvest	% Success
	Authorized	Sold	Bag Limit ¹		
303 SCA1	2000	999	2aowt	567	57%
304 SCA2	2000	1409	2aowt	876	62%
350 SCA3	400	210	2aowt	87	41%
351 SCA4	300	217	1ao,1aowt	116	53%
352 SCA5	1000	1000	2aowt	466	47%
353 SCA6	500	379	1ao,1aowt	201	53%
305 SCA8	1400	907	2aowt	466	51%
355 SCA8W	300	283	1ao	116	41%
306 SCA9	1200	803	2aowt	343	43%
356 SCA9N	300	183	2ao	96	52%
307 SCA11	500	431	1ao,1aowt	268	62%
308 SCA12	1500	1498	2aowt	703	47%
309 SCA13	400	401	1aowt	111	28%
310 SCA17	800	799	1ao,1aowt	694	87%
358 SCA17WR	400	122	2aowt	104	85%
311 SCA18	1600	912	2ao	412	45%
312 SCA19	2000	2000	2ao	797	40%
313 SCA20	5800	5800	2aowt	2407	42%
314 SCA21	8000	4428	2ao	1962	44%
315 SCA22	700	357	2ao	219	61%
316 SCA23	600	600	2ao	411	69%
317 SCA24	300	300	1ao	102	34%
359 SCA24R	300	102	2aowt	59	58%
318 SCA25	400	400	1aowt	121	30%
360 SCA25N	150	133	1ao	53	40%
Total	32,850	24,673		11,757	48%

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

Table 8. Season Choice Area antlerless deer harvest, 2005-2011.

Year	SCA Antlerless Season		
	Permits Issued	Harvest	Success
2007	23,515	15,617	66%
2008	23,405	14,738	63%
2009	24,921	15,009	60%
2010	25,268	13,747	54%
2011	24,673	11,757	48%

Special Seasons - Special seasons were established in refuge areas to reduce deer numbers. These were antlerless-only hunts except for Boyer Chute National Wildlife Refuge and DeSoto Bend National Wildlife Refuge, except for DeSoto December muzzleloader which also allows buck harvest (Table 9). Due to Missouri River flooding in 2011 these seasons were closed.

Table 9. Harvest and Success for Special Seasons, 2011. Seasons CLOSED due to Flooding

Unit	Permits			Harvest	% Success
	Authorized	Sold	% Either Sex ¹		
Boyer Chute October	70	0	2AOWT	0	
Boyer Chute November	70	0	2AOWT	0	
Boyer Chute December	70	0	2AOWT	0	
DeSoto October Early	80	0	2AOWT	0	
DeSoto October Late	140	0	2AOWT	0	
DeSoto December MZ Esex	100	0	1ES,1AO	0	
DeSoto January	160	0	2AOWT	0	

* Bonus tags elevate success.

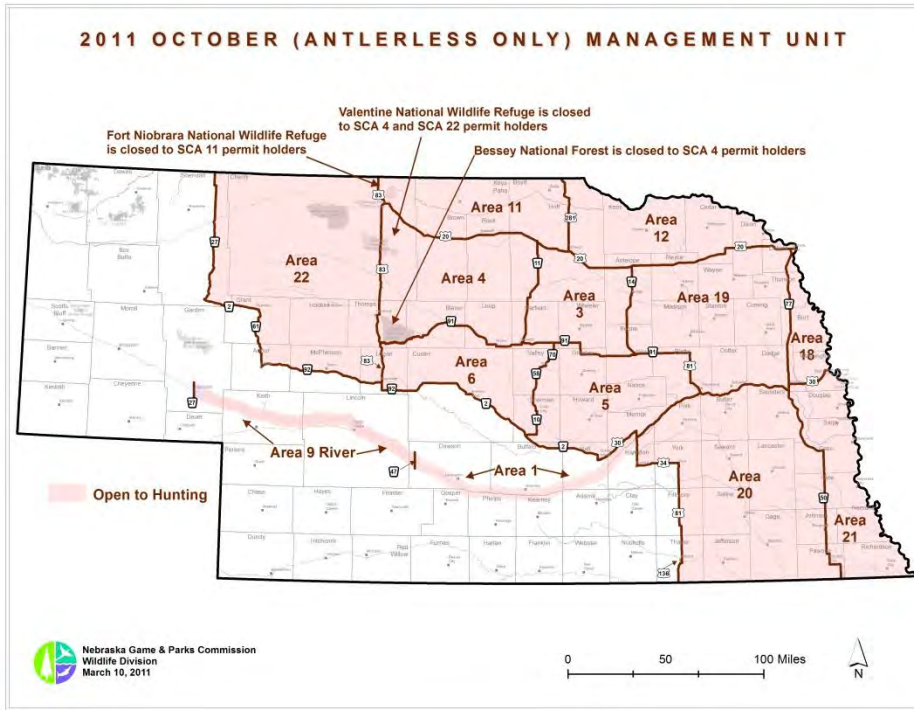
¹AO = antlerless deer only, WT = whitetail deer, ES = Either sex

October Antlerless Seasons – A firearm antlerless season was established in 2010 to increase harvest of antlerless deer in 60% of the state (Figure 3). Permit fees were \$11 to encourage harvest in the eastern 2/3 of the state. Success and participation decreased in 2011 (Table 10).

Table 10. October Antlerless Season (2010-2011)

Year	Permits			Harvest	% Success
	Authorized	Sold	% Either Sex ¹		
2010	unlimited	7,223	2AOWT	2,696	38
2011	unlimited	4,177	2AOWT	1,560	37

Figure 3: October Antlerless Unit



Mule Deer and White-tailed Deer Harvest - Mule deer harvest declined 9% to 9,699. Harvest the past 30 years has remained relatively stable, ranging from 9,155 to 11,787. Whitetail harvest has quadrupled during the past 30 years (Table 11) as herds have expanded.

Table 11. White-tailed and Mule Deer Harvest, All Seasons, 1980-2011.

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
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
2010	141,573	10,709	77,028	88,034
2011	140,350	9,699	76,443	86,609

* Does not include bonus tags

** Includes unknown species

Age of harvested bucks has shifted to older animals in all units as evidenced in the increasing percentage of age 2 and older (2+) whitetail bucks harvested statewide (75%). Mule deer harvest has also shifted to older bucks statewide (83% 2+ MD bucks in 2010). This trend towards older bucks has been ongoing for more than 20 years and is indicative of the increasing average age of bucks in the deer herd (Table 12).

Table 12. Percentage of older white-tail and mule deer bucks in the harvest, 1992-2011.

% Harvested Bucks ≥ 2 Years Old	White-tail Bucks					Mule Deer Bucks				
	1992	1997	2002	2007	2011	1992	1997	2002	2007	2011
	33	45	52	64	77	36	46	59	76	83

Discussion: Whitetail harvest records were expected in 2011 with the addition of Earn-A-Buck in three units. This did not occur due to reduced buck harvest in several unit, likely due to a combination of warm weather and a declining whitetail herd in eastern units. Numerous complaints of “NO DEER” were received by hunters.

Mule deer buck harvest has declined 17% since 2008. Suspected causes are Meningeal worm mortality and interspecific competition as whitetails continue to expand into mule deer ranges. Mule doe harvest is the lowest in twenty-five years. If MD buck harvest continues to decline, additional restrictions on antlerless mule deer harvest is likely.

Mule Deer Conservation Area rules have been effective in reducing mule deer harvest, but complexity of rules has led to hunter confusion, permit allocation issues and a permit system failure that resulted in excessive harvest of MD bucks in the Frenchman unit. Modifications to MDCA rules are needed to simplify permitting and to give residents preference for permits.

Nonresident permits sales increased 10% to 16,769 which was 1,500 above last year’s record. In some mule deer units, permit demand exceeds permit availability. The trend of increasing nonresident demand will best be addressed with legislative authority to have nonresident permit quotas.

2012 STATUS REPORT ON DEER MANAGEMENT IN NORTH DAKOTA
by
Bill Jensen and Bruce Stillings
North Dakota Game and Fish Department
(September 25, 2012)

2011 Regular Deer-Gun Season Structure - Regulations for the 2011 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 106,814 licenses were issued of the 109,950 licenses made available for the 2011 regular deer-gun season (Table 1a). The distribution of these deer licenses was as follows: 14,879 gratis landowners, 85,751 residents, and 6,184 non-resident lottery licenses.

The deer-gun season throughout the state was 16½ days in length (November 4 to 20). The deer gun season started at noon, CST, November 4, 2011 for all units. The daily hunting hours are from one-half hour before sunrise to one-half hour after sunset.

2011 Deer-Gun Season Harvest - Based upon harvest survey questionnaires it is estimated that 90% of the licensees actively attempted to hunt and harvest a deer. This resulted in the harvest of 45,500 white-tailed deer and 4,142 mule deer. The overall success rate for licensees that actually hunted was 51%. A breakdown of the harvest, by species of deer and hunting unit, is provided in Table 2a.

2011 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 2011, there were 1,053 antlered and 1,053 antlerless white-tailed deer licenses issued. The season opened at noon, CST, November 25, 2011 and ran from one-half hour before sunrise to one-half hour after sunset each day thereafter through December 11, 2011. 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.

2011 Muzzleloading Long Gun Harvest - All 2,106 muzzleloader licensee's were sent a questionnaire, of which an estimated 1,792 actually hunted during the season (87%). The projected harvest of white-tailed deer was 624 deer (344 antlered and 280 antlerless) for an overall success rate of 34.8% (Table 3a).

2011 Archery Season Structure - Archery deer licenses are issued over the counter through license vendors and county auditors with no restrictions on species or sex. The 2011 archery deer season started at noon, CTS, September 2, 2011 and continued from one-half hour before sunrise to one-half hour after sunset each day until January 8, 2012. 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 (n=1,091).

2011 Archery Harvest - In total, 19,049 archery licenses were sold in 2011. After the season, 4,117 questionnaires were sent to resident and nonresident license holders from the 2010 season. Expanding the sample results projected that 19,625 of the hunters who bought a license actually went hunting (89.1%). These deer-bow hunters had an overall success rate of 27.3%, with a total harvest of 5,355 deer (4,893 white-tailed deer and 462 mule deer) (Table 3a).

2011 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 2011, 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 250 licenses in 2011). The nine and one-half day season ran from noon, CTS, September 16 and closed September 25, 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.

2011 Youth Deer Gun Season Harvest - A total of 3,920 youth licenses were sold. After the youth season, questionnaires were sent to all 3,920 licensees. An estimated 3,405 teenagers participated in the youth season (87%). They experienced an overall success rate of 51.7%, with a total harvest of 1,702 deer (1,563 white-tailed deer and 139 mule deer). When harvest during the regular deer-gun season is included, a total overall harvest by youth hunters was 1,752 deer (1,589 white-tailed deer and 258 mule deer) (Table 3a).

2011 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 September 2, 2011 through January 31, 2012. 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 three 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.

Finally, in addition to the information mentioned above that the hunter observation forms provide (demographics of our deer population and an index of the relative change in deer numbers); hunters are also asked the number of elk sighted, the number of moose sighted, and if they observed mountain lions or feral pigs. Observations of elk and moose are displayed in Figures 4 and 5, respectively. Observations of mountain lions and pigs are shared with other biologists.

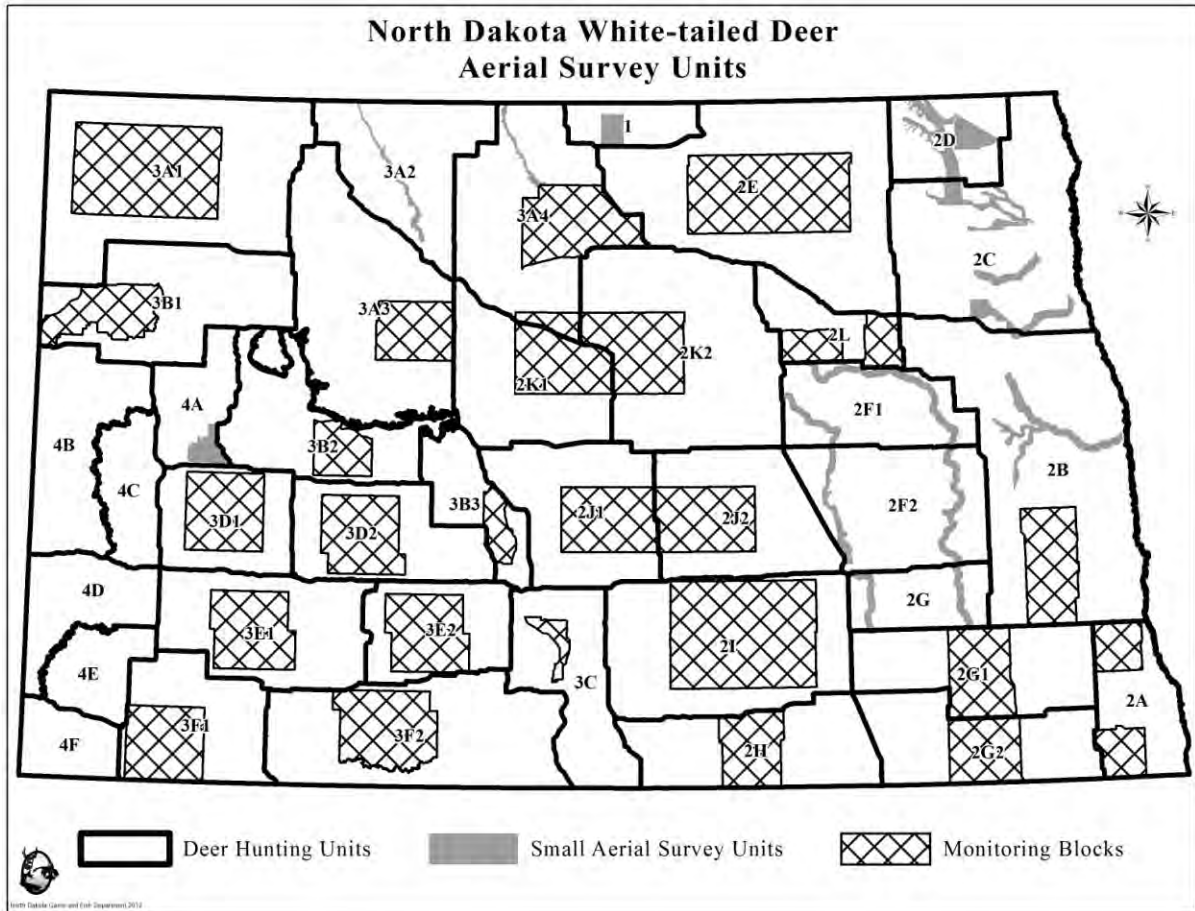


Figure 1. A map of North Dakota that shows the distribution of deer-gun hunting units within the state; also displayed within each hunting unit are the locations of winter aerial white-tailed deer survey units and monitoring blocks.

Appendix A:

Summary of 2011-2012 Mule Deer and White-tailed Deer Harvest, Census, and Demographic Data

1. A total of 106,814 licenses were issued of the 109,950 licenses made available for the regular deer-gun season (Table 1a).
2. The overall hunter success for the 2011 regular gun season was 51.4 percent.
3. Deer-gun hunters harvested an estimated 45,500 white-tailed deer and 4,142 mule deer during the 2011 season (Table 2a).
4. Youth deer hunters in 2011 had a success rate of 48.0 percent during the youth season, and harvested 1494 white-tailed deer and 139 mule deer during the youth deer season (Table 3a). During the regular deer-gun season an additional 95 white-tailed deer, and 24 mule deer harvested by youth hunters.
5. Muzzleloader hunters in 2011 had a success rate of 34.8 percent, and harvested 646 white-tailed deer (Table 3a).
6. Archery hunters in 2011 had a success rate of 27.3 percent, and harvested 4,893 white-tailed deer and 462 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 southeastern 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 2464 useable questionnaires from the 2011 Hunter Observation Survey (n=27,959 white-tailed deer and 7,178 mule deer classified), overall white-tailed deer population demographics suggest that about 16 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=1,055 mule deer classified), and Hunter Observation Survey results (n=7,178 mule deer classified) for the Badlands Major management Units, overall mule deer population demographics suggest that between 17 and 23 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 2011 data set for elk and moose observations are given in Figures 4 and 5.

Table 1a. Summary of license numbers available for hunting units by license type for the 2011 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	900	1,000				
RED RIVER	2A	500	200				
	2B	4,100	3,500				
	2C	3,000	4,250				
PEMBINA HILLS	2D	1,400	1,800				
SHEYENNE	2F1	2,600	2,600				
	2F2	2,200	3,000				
	2G	700	700				
	2G1	1,700	1,700				
	2G2	1,200	1,600				
COTEAU	2E	2,000	2,500				
	2H	1,000	1,400				
	2I	1,600	2,000				
	2J1	700	700				
	2J2	1,800	2,300				
	2K1	1,000	1,800				
	2K2	3,000	5,000				
	3A1	900	500				
	3A3	1,100	1,200				
DEVILS LAKE	2L	800	1,400				
SOURIS	3A2	1,300	2,100				
	3A4	2,100	2,500				
MISSOURI	3B1			400	300	500	500
	3B2			300	400	250	250
	3B3	150	150	1,000	1,700		
	3C	100	200	1,100	1,400		
SLOPE	3D1	250	400	250	300		
	3D2	400	500	350	400		
	3E1	400	1,000	600	800		
	3E2	600	1,000	450	800		
	3F1	450	900	800	1,200		
	3F2	450	1,200	800	1,200		
BADLANDS	4A			250	300	300	300
	4B			200	200	400	300
	4C			200	350	400	300
	4D			250	300	350	200
	4E			250	250	200	100
	4F			300	500	100	100
	TOTALS	38,400	49,100	7,500	10,400	2,500	2,050

TOTAL LICENSES = 109,950

Table 2a. Summary of 2011 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	270	373	643	1.00/1/0.38				
2A	281	125	406	3.51/1/0.56				
2B	1488	1739	3227	1.24/1/0.45				
2C	948	1867	2815	0.68/1/0.34				
2D	390	811	1201	0.62/1/0.29				
2E	738	996	1734	1.03/1/0.39				
2F1	986	1658	2644	1.04/1/0.75				
2F2	840	1503	2343	0.76/1/0.36				
2G	296	259	555	1.64/1/0.44				
2G1	769	738	1507	1.79/1/0.72				
2G2	553	878	1431	0.92/1/0.46				
2H	491	901	1392	0.78/1/0.43				
2I	867	1113	1980	1.13/1/0.45				
2J1	390	279	669	2.07/1/0.48				
2J2	729	1159	1888	0.95/1/0.51				
2K1	566	804	1370	1.19/1/0.69				
2K2	1309	2766	4075	0.62/1/0.31				
2L	345	771	1116	0.67/1/0.50				
3A1	326	116	442	4.02/1/0.43				
3A2	708	1187	1895	0.99/1/0.66				
3A3	466	426	892	1.87/1/0.71				
3A4	813	1126	1939	1.01/1/0.40				
3B1	112	70	182	2.33/1/0.46	175	189	364	1.05/1/0.14
3B2	192	121	313	1.37/1/0.31	88	98	186	1.35/1/0.51
3B3	540	796	1336	0.99/1/0.46	54	37	91	1.69/1/0.16
3C	696	920	1616	1.15/1/0.52	88	34	122	4.40/1/0.70
3D1	68	179	247	0.65/1/0.72	95	140	235	0.81/1/0.19
3D2	222	286	508	1.33/1/0.71	148	135	283	1.59/1/0.45
3E1	280	474	754	1.04/1/0.76	119	178	297	1.20/1/0.80
3E2	450	701	1151	0.91/1/0.42	150	195	345	1.09/1/0.42
3F1	369	559	928	1.01/1/0.53	104	189	293	0.70/1/0.28
3F2	611	636	1247	1.43/1/0.49	168	236	404	1.04/1/0.46
4A	45	78	123	1.15/1/1.00	113	112	225	1.33/1/0.32
4B	61	56	117	2.03/1/0.87	194	126	320	1.94/1/0.26
4C	41	69	110	1.11/1/0.86	211	152	363	1.94/1/0.39
4D	97	112	209	1.63/1/0.85	224	112	336	2.55/1/0.27
4E	98	86	184	2.04/1/0.79	124	58	182	2.88/1/0.35
4F	106	205	311	1.06/1/1.05	54	42	96	1.50/1/0.17
Total	18557	26943	45500	1.01/1/0.47	2109	2033	4142	1.41/1/0.35

Table 3a. Summary of 2011 September Youth Deer Seasons (N=3920 licenses issued; including new 12-year-old antlerless white-tailed deer only season), muzzleloader (N=2,106 licenses issued), and archery season (N=22,020 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	231	1263	1494	0.32/1/0.38 (231/717/272)	110	29	139	5.0/1/0.32 (110/22/7)
Muzzle-Loader	344	280	624	1.93/1/0.57 (344/178/102)				
Archery	3553	1340	4893	3.44/1/0.29 (3553/1034/306)	375	59	462	6.36/1/0.47 (375/59/28)
Total	4128	2883	7011	2.14/1/0.35 (4128/1929/680)	485	88	601	5.99/1/0.43 (485/81/35)

Table 4a. Summary of white-tailed deer population indices for 2011-2012 (i.e., 2012 winter aerial survey [Deer/ Sq. Mi.], 2011 deer-vehicle collisions, and 2011 white-tailed deer observed by hunters per hour of effort during the first Saturday and Sunday of the 2011 regular deer season (number of useable surveys)).

Hunting Unit	2012 Winter Aerial Survey (Sample Size)	2011 Deer-Vehicle Collisions (MD & WTD)	2011 Hunter Obs. WTD/Hr. \pm s.d. (Sample Size)
Turtle Mountains 1	NA	Stable to Decreasing	0.62 \pm 1.21 (46) Decreasing
Red River All Units		Stable to Decreasing	NA
2A	1.3 (269/213.3) Decrease	Stable	1.15 \pm 1.26 (64) Stable
2B	NA	Stable	0.93 \pm 1.28 (59) Decreasing
2C	NA	Decreasing	0.87 \pm 1.20 (69) Decreasing
Pembina Hills 2D	NA	Stable	0.81 \pm 0.85 (48) Decreasing
Sheyenne-James River All Units	NA	Stable	NA
2F1	NA	Increasing	1.15 \pm 0.94 (69) Decreasing
2F2	NA	Stable	0.94 \pm 0.67 (68) Decreasing
2G	NA	Stable	0.92 \pm 0.73 (59) Stable to Decrease
2G1	NA	Decreasing	1.29 \pm 1.23 (57) Stable
2G2	NA	Stable	1.32 \pm 1.34 (55) Decreasing
Devils Lake 2L	NA	NA	1.97 \pm 2.00 (45) Stable to Decrease
Coteau Hills All Units	NA	Stable to Decreasing	NA
2E	NA	Decreasing	0.82 \pm 0.84 (55) Decreasing
2H	NA	Stable to Decreasing	1.68 \pm 1.40 (54) Stable to Increase
2I	NA	Stable	1.43 \pm 1.16 (61) Stable to Increase
2J1	NA	Stable	1.04 \pm 0.80 (42) Stable
2J2	NA	Decreasing	1.37 \pm 1.64 (62) Stable

Table 4a. (Continued)

Hunting Unit	2012 Winter Aerial Survey (Sample Size)	2011 Deer-Vehicle Collisions (MD & WTD)	2011 Hunter Obs. WTD/Hr. \pm s.d. (Sample Size)
Coteau Hills 2K1	NA	Stable to Decreasing	1.02 \pm 1.01 (49) Decreasing
2K2	NA	Stable to Decreasing	1.03 \pm 0.74 (67) Decreasing
3A1	NA	Decreasing	1.30 \pm 1.19 (42) Stable
3A3	NA	Stable	1.12 \pm 1.11 (46) Stable to Decrease
Souris Des Lacs All Units	NA	Stable	NA
3A2	NA	Stable to Increasing	2.06 \pm 3.30 (52) Stable to Increase
3A4	NA	Stable to Decreasing	1.28 \pm 1.77 (48) Stable to Decrease
Missouri River All Units	NA	Decreasing	NA
3B1	NA	NA	1.34 \pm 1.39 (29) Decreasing
3B2	NA	Decreasing	0.88 \pm 0.82 (21) Decreasing
3B3	NA	NA	1.51 \pm 2.04 (67) Stable
3C	NA	Decreasing	2.00 \pm 2.64 (53) Increasing
Slope All Units	NA	Stable to Decreasing	NA
3D1	NA	Stable to Decreasing	0.57 \pm 0.61 (8)*** Decreasing
3D2	NA	Stable to Decreasing	1.02 \pm 0.95 (47) Stable
3E1	NA	Decreasing	1.22 \pm 0.97 (39) Decreasing
3E2	NA	Stable	2.17 \pm 1.61 (34) Decreasing
3F1	NA	Stable	2.43 \pm 1.56 (41) Decreasing
3F2	3.1 (2022/656) Decreasing	Decreasing	2.80 \pm 1.91 (41) Stable to Decrease

*** Small Sample

Table 4a. (Continued)

Hunting Unit	2012 Winter Aerial Survey (Sample Size)	2011 Deer-Vehicle Collisions (MD & WTD)	2011 Hunter Obs. Deer/Hr. \pm s.d. (Sample Size)
Badlands All Units	NA	Decreasing	NA
4A	NA	NA	0.56 \pm 0.81 (32) Decreasing (Mule Deer Hunter Observations)
4B	NA	Decreasing	0.47 \pm 1.27 (50) Decreasing (Mule Deer Hunter Observations)
4C	NA	Decreasing	0.15 \pm 0.42 (64) Decreasing (Mule Deer Hunter Observations)
4D	NA	NA	1.00 \pm 1.57 (84) Decreasing (Mule Deer Hunter Observations)
4E	NA	Decreasing	1.60 \pm 2.15 (22)*** Decreasing (Mule Deer Hunter Observations)
4F	NA	Stable	3.17 \pm 3.01 (20)*** Stable (ALL Deer Hunter Observations)

*** Small Sample

Table 5a. Summary of mule deer population indices for 2011-2012 (i.e., 2012 winter/spring aerial survey, 2011 Deer-vehicle collisions, and 2011 mule deer observed by hunters per hour of effort during the first Saturday and Sunday of the 2011 regular deer season(number of useable surveys).

Hunting Unit	2012 Winter(*) or Spring Aerial Survey (Sample Size)	2011 Deer-Vehicle Collisions (MD & WTD)	2011 Hunter Obs. MD/Hr. \pm s.d. (Sample Size)
Missouri River All Units	NA	Stable to Increasing	NA
3B1	NA	NA	0.44 \pm 0.68 (29) Decreasing All Hunters
3B2	NA	Decreasing	0.26 \pm 0.40 (21) Decreasing All Hunters
3B3	NA	NA	0.14 \pm 0.35 (67) Decreasing All Hunters
3C	NA	Decreasing	0.45 \pm 0.61 (53) Decrease All Hunters
Slope All Units	0.8 (566/683) Decreasing	Stable to Decreasing	NA
3D1	NA	Decreasing	1.07 \pm 1.80 (8)***
3D2	NA	Stable to Decreasing	0.59 \pm 0.74 (47) Decreasing All Hunters
3E1	NA	Decreasing	0.32 \pm 0.42 (39) Decreasing All Hunters
3E2	NA	Stable to Decreasing	0.54 \pm 1.25 (50) Decreasing All Hunters
3F1	NA	Stable	0.96 \pm 1.19 (41) Decreasing All Hunters
3F2	0.8 (566/683) Decreasing	Decreasing	1.14 \pm 1.12 (41) Decreasing All Hunters

*** Small Sample

Table 5a. (Continued)

Hunting Unit	2012 Spring Aerial Survey (Sample Size)	2011 Deer-Vehicle Collisions (MD & WTD)	2011 Hunter Obs. MD/Hr. \pm s.d. (Sample Size)
Badlands All Units	4.6 (1382) Decreasing	Stable to Decreasing	NA
4A	7.2 (197) Decreasing	NA	0.87 \pm 0.74 (32) Decreasing All Hunters
4B	5.0 (326) Stable	Decreasing	1.30 \pm 1.08 (50) Decreasing All Hunters
4C	4.6 (143) Stable	Decreasing	0.97 \pm 0.74 (64) Decreasing All Hunters
4D	5.7 (430) Decreasing	NA	1.45 \pm 1.77 (84) Decreasing All Hunters
4E	3.5 (197) Decreasing	Stable to Decreasing	1.44 \pm 1.56 (22)*** Decreasing All Hunters
4F	2.3 (89) Decreasing	Stable to Decreasing	0.97 \pm 0.99 (20)*** 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 2011 regular deer season.

Hunting Unit	2011 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Turtle Mountains 1	0.32:1:0.84 (32-99-83)
Red River All Units	0.34:1:0.50 (397-1151-575)
2A	0.36:1:0.49 (172-478-232)
2B	0.30:1:0.46 (108-359-166)
2C	0.37:1:0.56 (117-314-177)
Pembina Hills 2D	0.29:1:0.65 (81-275-178)
Sheyenne-James River All Units	0.29:1:0.49 (637-2179-1060)
2F1	0.33:1:0.53 (169-507-267)
2F2	0.27:1:0.54 (123-449-241)
2G	0.31:1:0.40 (105-342-137)
2G1	0.25:1:0.48 (109-428-207)
2G2	0.29:1:0.46 (131-453-208)
Devils Lake 2L	0.23:1:0.64 (121-515-328)
Coteau Hills All Units	0.30:1:0.48 (1234-4071-1959)
2E	0.26:1:0.53 (86-328-173)
2H	0.33:1:0.38 (246-735-280)
2I	0.27:1:0.53 (159-581-307)
2J1	0.32:1:0.38 (114-356-137)
2J2	0.28:1:0.53 (162-583-311)

Table 6a (Continued).

Hunting Unit	2011 Hunter Obs. Buck:Doc:Fawn (Sample Size)
Coteau Hills 2K1	0.40:1:0.54 (131-325-176)
2K2	0.30:1:0.49 (148-498-243)
3A1	0.23:1:0.49 (81-355-174)
3A3	0.35:1:0.51 (107-310-158)
Souris Des Lacs All Units	0.30:1:0.47 (311-1022-476)
3A2	0.31:1:0.41 (183-600-245)
3A4	0.30:1:0.55 (128-422-231)
Missouri River All Units	0.30:1:0.65 (467-1551-1003)
3B1	0.20:1:0.49 (56-258-140)***
3B2	0.17:1:0.51 (23-136-70)***
3B3	0.33:1:0.85 (180-549-466)
3C	0.34:1:0.54 (208-608-327)
Slope All Units	0.27:1:0.55 (803-2981-1653)
3D1	0.08:1:0.42 3-38-16***
3D2	0.26:1:0.51 (89-344-177)***
3E1	0.20:1:0.71 (64-319-225)
3E2	0.32:1:0.48 (227-706-339)
3F1	0.22:1:0.61 (178-795-488)
3F2	0.31:1:0.64 (242-779-408)

*** Small Sample

Table 6a. (Continued).

Hunting Unit	2011 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Badlands All Units (All Hunters)	0.27:1:0.63 (368-1368-867)
4A (All Hunters)	0.16:1:0.64 (19-122-78)***
4B (All Hunters)	0.27:1:0.47 (35-132-62)***
4C (All Hunters)	0.40:1:0.89 (19-47-42)***
4D (All Hunters)	0.25:1:0.46 (137-540-251)
4E (All Hunters)	0.28:1:0.74 (60-217-160)***
4F (All Hunters)	0.32:1:0.88 (98-310-274)***
Statewide (All Hunter Observations)	0.32:1:0.54 (4,468-15,277-8,214)

*** Small Sample

Table 7a. Summary of mule deer buck:doe:fawn ratios based upon fall 2011 aerial survey and observations by hunters during the first Saturday and Sunday of the 2011 regular deer season.

Hunting Unit	Fall 2011 Aerial Survey Buck:Doe:Fawn (Sample Size)	2011 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Missouri River All Units	NA	0.26:1:0.39 (103-400-156) (All Hunters)
3B1	NA	0.29:1:0.41 (28-95-45)***
3B2	NA	0.29:1:0.05 (16-55-3)***
3B3	NA	0.17:1:0.50 (12-72-36)***
3C	NA	0.26:1:0.40 (47-178-72)
Slope All Units	NA	0.26:1:0.40 (314-1213-487) (All Hunters)
3D1	NA	0.11:1:0.52 (5-46-24)***
3D2	NA	0.30:1:0.43 (62-205-88)***
3E1	NA	0.48:1:0.34 (44-92-31)***
3E2	NA	0.18:1:0.34 (24-130-44)***
3F1	NA	0.31:1:0.44 (99-319-139)
3F2	NA	0.19:1:0.38 (80-421-161)

*** Small Sample

Table 7a. (Continued).

Hunting Unit	Fall 2011 Aerial Survey Buck:Doe:Fawn (Sample Size)	2011 Hunter Obs. Buck:Doe:Fawn (Sample Size)
Badlands All Units	0.47:1:0.59 (242-510-303)	0.28:1:0.44 (678-2457-1071)
4A	0.52:1:0.61 (23-44-27)	0.28:1:0.40 (63-223-89)***
4B	0.50:1:0.48 (46-92-44)	0.37:1:0.36 (166-445-159)
4C	0.44:1:0.57 (43-98-56)	0.31:1:0.50 (147-469-236)
4D	0.53:1:0.67 (48-126-54)	0.24:1:0.39 (225-944-365)
4E	0.42:1:0.72 (43-102-73)	0.22:1:0.56 (54-248-138)
4F	0.81:1:0.63 (39-48-30)	0.18:1:0.66 (23-128-84)***
Statewide	NA	0.29:1:0.44 (1838-6313-2793) (All Hunters)

*** Small Sample

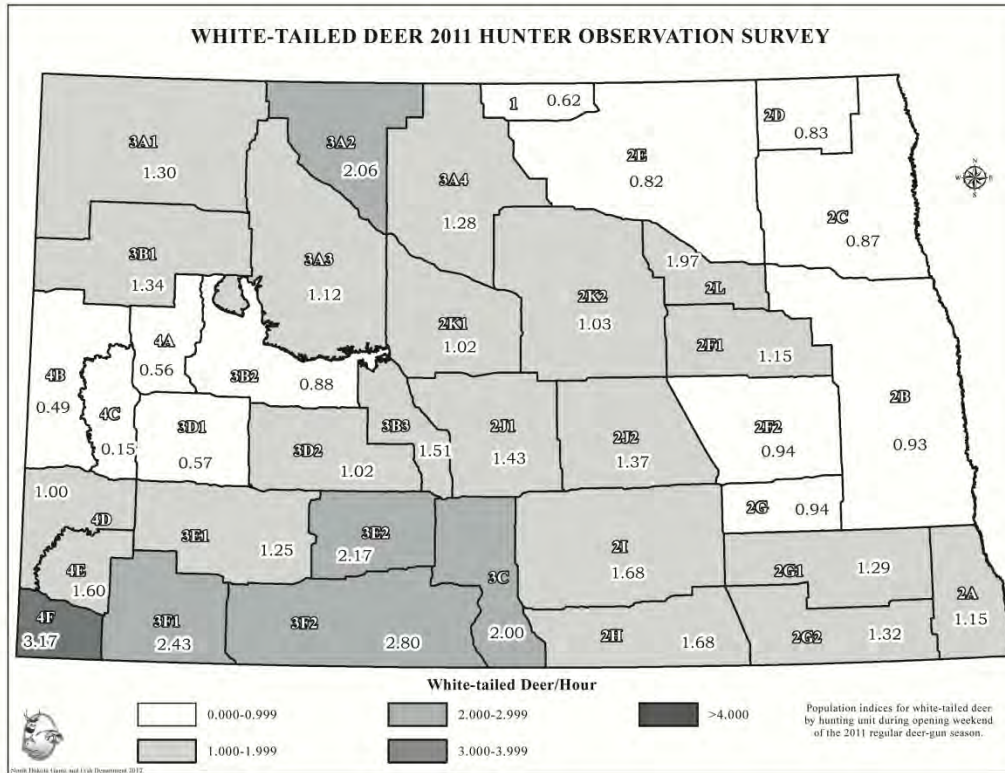


Figure 1. Map of North Dakota illustrating the use of observation rates by hunters (white-tailed deer sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2011 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for white-tailed deer population trends since 2004.

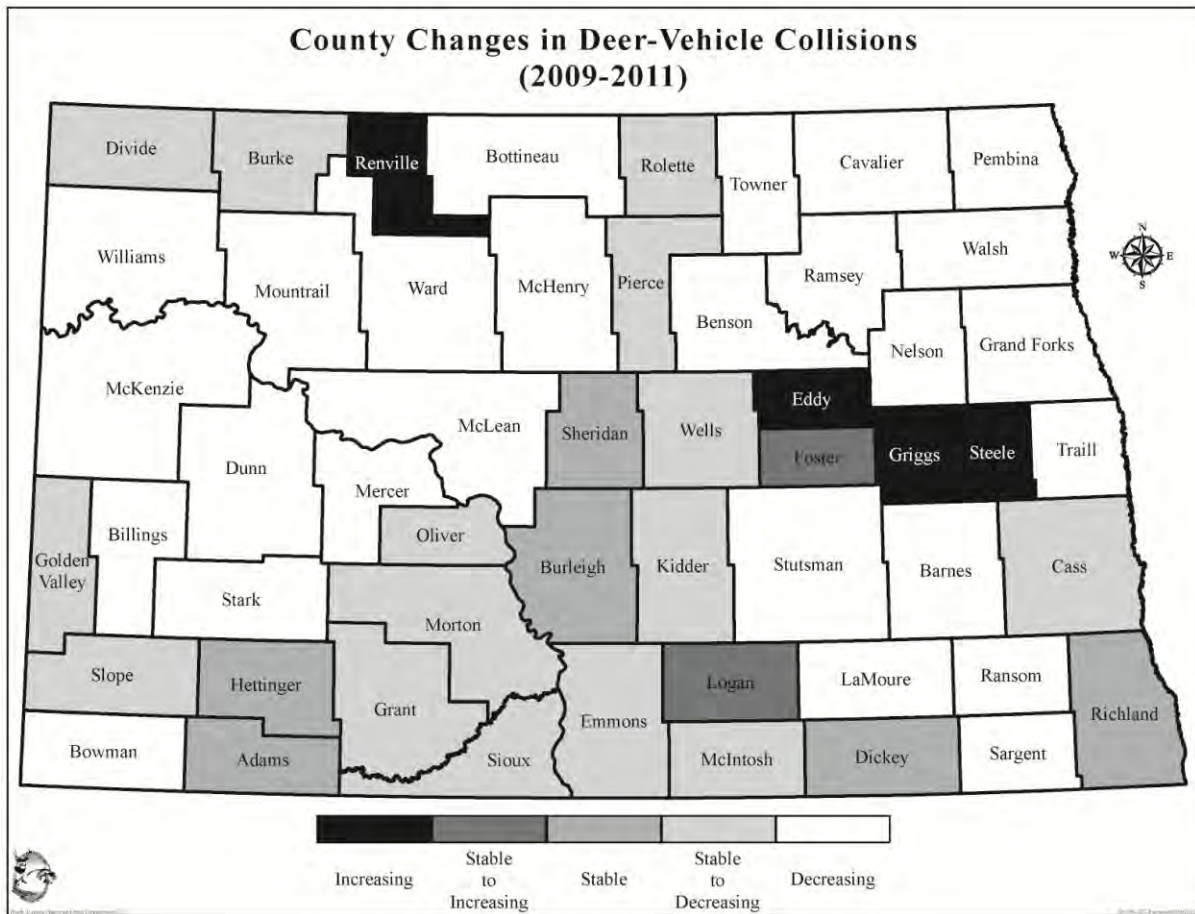


Figure 2. Map of North Dakota illustrating trends in Deer-Vehicle Collisions (DVC) as a population index for each county. Year-to-year changes in DVC rates have been monitored statewide for deer population trends since 2001.

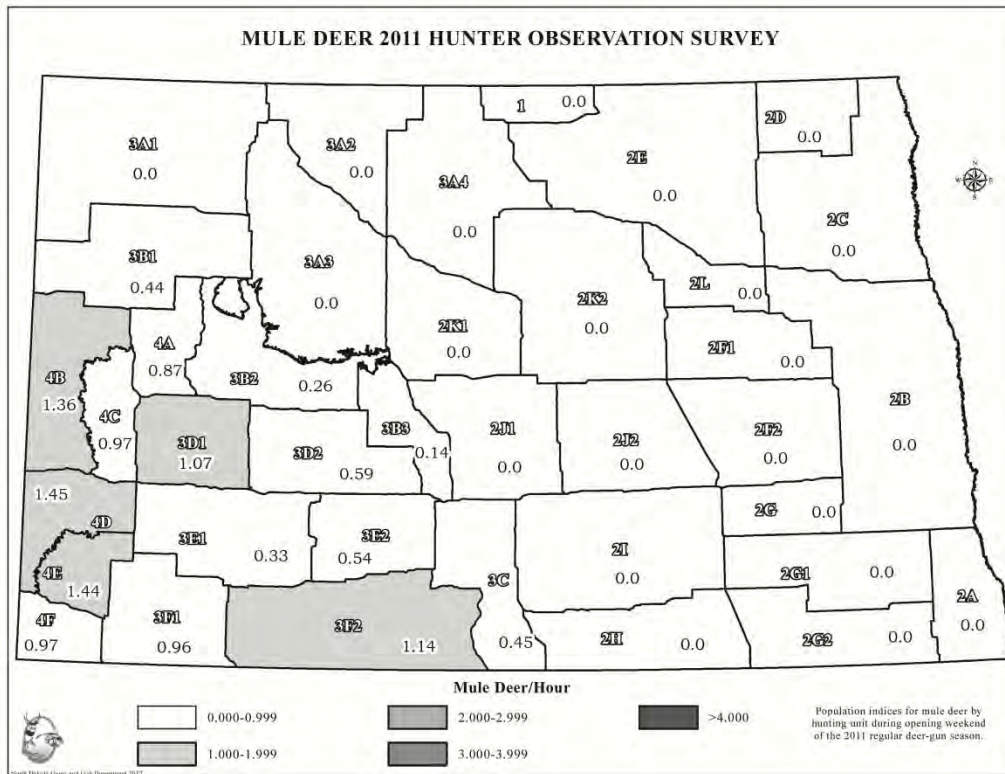


Figure 3. Map of North Dakota illustrating the use of observation rates by hunters (mule deer sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2011 deer-gun season. Year-to-year changes in hunter observation rates have been monitored for mule deer population trends in the Badlands units (4A – 4F) since 1998, and statewide since 2004.

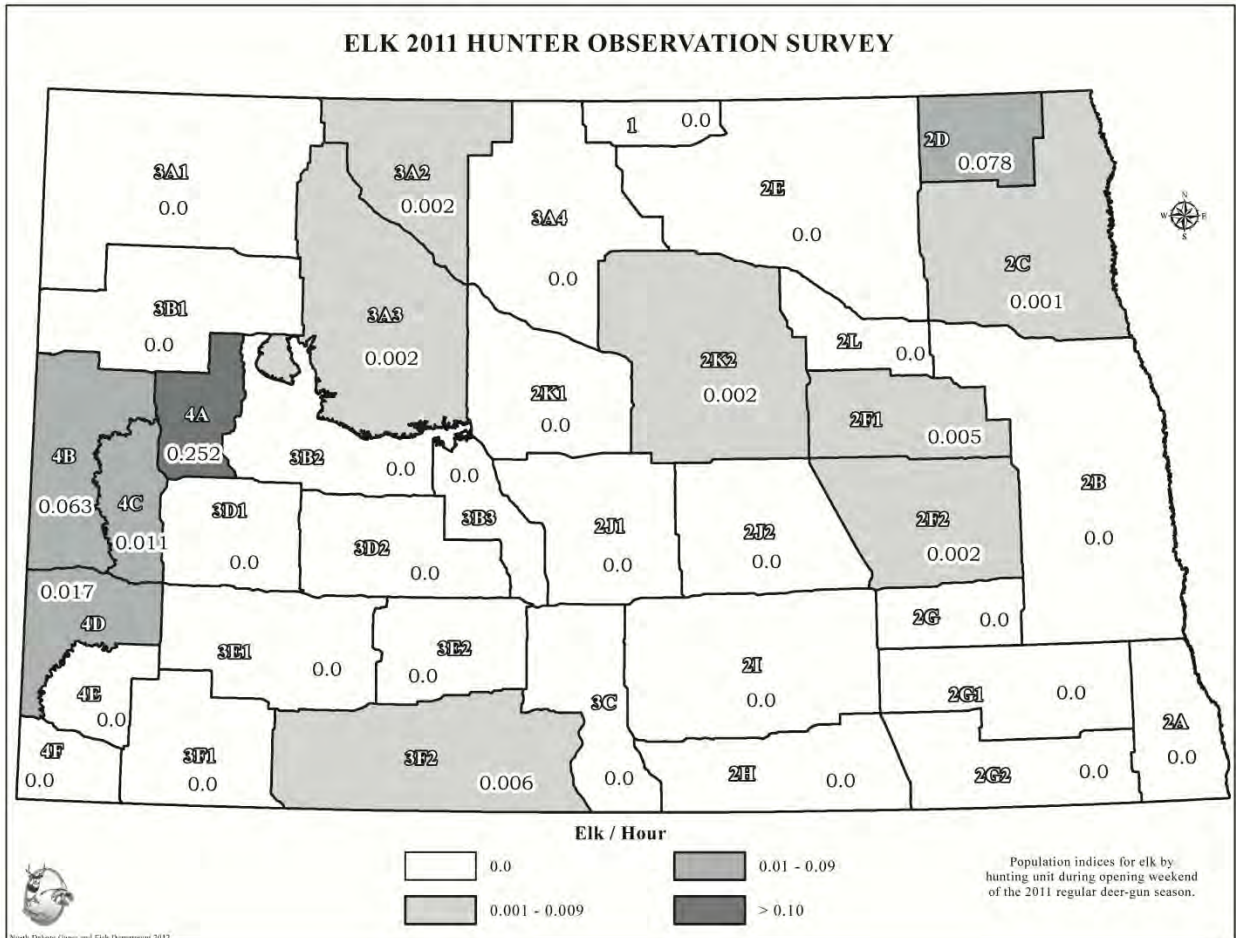


Figure 4. Map of North Dakota illustrating the use of observation rates by hunters (elk sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2011 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for elk population trends since 2007.

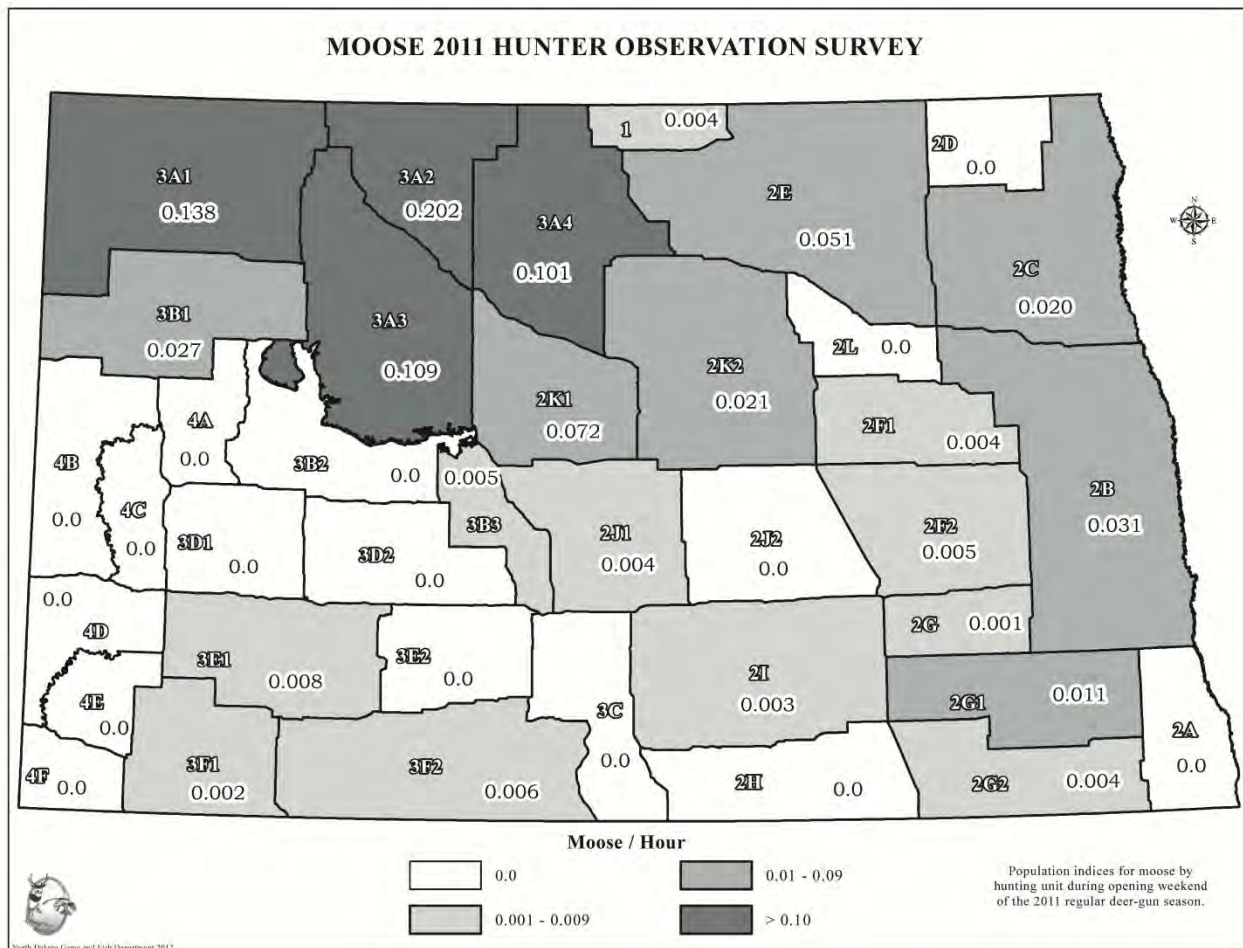


Figure 5. Map of North Dakota illustrating the use of observation rates by hunters (moose sighted/hour of effort spent hunting) as a population index for each deer-hunting unit. Hunter observations were made during the first Saturday and Sunday of the regular 2011 deer-gun season. Year-to-year changes in hunter observation rates have been monitored statewide for moose population trends since 2007.

SUMMARY OF 2011-12 OHIO DEER SEASONS

OUR MANAGEMENT STRATEGY

The goal of Ohio's deer program is to provide a deer population that maximizes recreational opportunity including viewing, photographing, and hunting while minimizing conflicts with agriculture, motor travel, and other areas of human endeavor. This has been our goal for nearly 50 years. Farmer attitude surveys are used to establish and update population goals for most counties. We believe these goals represent a reasonable compromise between interests with opposing opinions on appropriate deer population levels. Furthermore, although these goals are based on social values, the resulting populations have never exceeded the biological carrying capacity of the habitat. Deer herd condition data collected annually and through periodic studies confirm this. Our deer management goal ensures that Ohio's deer herd is maintained at a level that is acceptable to most, and biologically sound. Maintaining the deer population at or near goal is accomplished through harvest management.

SEASONS, PERMITS, AND BAG LIMITS

A valid hunting license (resident = \$19, nonresident = \$125) and either a deer permit (\$24) or antlerless deer permit (\$15) are required (landowners are exempt) to hunt deer in Ohio. Hunters could harvest up to 18 deer with a combination of deer and antlerless permits during the 2011-12 season (Fig. 1). Hunters were allowed only one antlered deer. Hunters had the opportunity to harvest deer during Ohio's five seasons including: archery Sep. 24, 2011 - Feb. 5, 2012, early muzzleloader Oct. 17-22, gun Nov. 28 - Dec. 4, bonus gun Dec. 17-18, and muzzleloader Jan. 7-10, 2012. This year, youth (17 and under) season was the weekend of Nov. 19-20. All seasons were either-sex and with the exception of the early muzzleloader season, all were statewide. The early muzzleloader season was restricted to Shawnee State Forest, Wolf Creek Wildlife Area/Wildcat Hollow, and Salt Fork Wildlife Area. The \$15 antlerless deer permit was available once again this year. Permits were good for an antlerless deer only and were valid statewide during the first nine weeks of the archery season. Unfilled permits could be used during deer gun season in Zone C only. Permits had to be purchased before gun season started, however. Antlerless permits could also be used in any of the five Urban Deer units and during many Division of Wildlife special and controlled hunts, including the early muzzleloader season. A maximum of 12 deer could be harvested using \$15 antlerless deer permits.

HARVEST

A total of 219,748 deer was harvested this year, an 8% decrease from last season (Table 1). Figure 2 summarizes total harvest by county with the top five counties highlighted. Coshocton County once again led the state in total harvest with 7,972 deer. A harvest summary by season for the top five counties is presented in Table 2. A complete harvest summary by county and season is available in Table 3.

Hunters harvested 90,828 deer during the traditional statewide gun season, 14% fewer than last year (Table 1). Coshocton, Muskingum, Tuscarawas, Guernsey, and Harrison counties led the state in gun harvest. The Bonus Gun harvest was down 20% this year. Hunters harvested 17,172 deer dur-

ing the two-day mid-December season. The top five Bonus Gun season counties were Coshocton, Tuscarawas, Muskingum, Licking, and Harrison. Archers reported harvesting 82,732 deer this year, 3% fewer than last season (Table 1). Archers accounted for 38% of the entire harvest. By comparison, just a decade ago the archery harvest accounted for just over 22% of the annual harvest. Crossbow hunters harvested 44,979 deer this year, an increase of nearly 900 deer over last season. Licking County led the state again with 1,738 deer, an increase of 3% from last year. Coshocton, Tuscarawas, Ashtabula and Guernsey rounded out the top five crossbow harvest counties. This year's vertical bow harvest of 37,753 deer represents an 8% decrease over last season. Licking County archers led the state once again with a vertical bow harvest of 1,447. This is the fifth consecutive year that Licking County has held the top spot for vertical bow harvest. Coshocton, Tuscarawas, Muskingum, and Hamilton counties rounded out the list of top five harvest counties. There were 19,459 deer harvested during the four-day statewide muzzleloader season, January 7-10 (Table 1). Coshocton County was the top spot for muzzleloader hunters with a harvest of 729 deer, 14% more than last year. Licking, Muskingum, Guernsey, and Tuscarawas counties rounded out the top five harvest counties. Young hunters took 8,867 deer this year, 3% more than last year. Top spots for youth hunters were Tuscarawas, Guernsey, Coshocton, Muskingum, and Holmes counties.

PERMITS AND LICENSES

The Division of Wildlife issued 603,549 deer permits in license year 2011-12 (Table 4), 1% fewer than last year. However, permit sales are off 3.5% since peaking in 2009-10. Although the increase was a modest 728 permits, the \$15 antlerless deer permit was the only permit to post an increase this year. In fact, antlerless deer permit sales have increased every year since they were first available in 2007-08. Antlerless deer permit sales are up 61% since 2007-08. Total deer permit sales are only up 4.5% over the same period, however. Youth deer permit sales declined for the second year in a row (Table 4). However, as noted, the youth harvest was up slightly this year.

DEER DAMAGE COMPLAINTS

Because population goals for most of Ohio's rural counties are based on farmer tolerances, the likelihood of widespread agricultural problems should be minimal when deer populations are at goal. However, some localized damage is still likely to occur. In situations where deer need to be killed to reduce property damage, landowners/lessees may be issued Deer Damage Control Permits (DDCP) at the time the damage is occurring. These permits allow landowners/lessees and their agents to kill deer during the dates and under the conditions specified on the permit. For most agricultural problems, these permits will only be valid for the period of January 1 until the start of the archery season. Under limited crop damage circumstances permits may be extended until the start of the youth gun season. In specific circumstances permits may be valid year-round to control damage at orchards, nurseries, inside municipalities, and for safety purposes at airports. Regardless of the situation, DDCPs expire no later than December 31 of the year in which the permit is issued. Except in the case of rub damage to trees, permit holders are strongly encouraged to kill antlerless deer. Permit holders must surrender all antlers to the Division of Wildlife. In 2011, a total of 1,402 crop damage complaints was received by the Division of Wildlife (Table 5, Figure 3). This number represents just 67 complaints fewer than last year. A total of 5,741 deer was killed on damage permits this year, 2% fewer than last season.

ANTLERLESS DEER HARVEST

Last year, nearly two of every three deer harvested were antlerless deer. However, roughly one of every five of these antlerless deer were male fawns, or button bucks. While there is no intent to

minimize the accomplishment of the successful hunter, from a herd management standpoint, there is little to be gained from harvesting a button buck. The good news is that we're in a good position to reduce the button buck harvest, due in large part to the ever-increasing popularity of bow hunting. Nearly eight in 10 deer hunters now bow hunt each year. Because archers are limited to close range shots, they are in a better position than gun hunters to reduce the harvest of button bucks. Moreover, because of longer seasons and overall greater harvest opportunities, bow hunters can afford to be more selective without compromising opportunity. Therefore, in an effort to highlight the importance of the button buck harvest from a population management standpoint, beginning last year we replaced "antlerless" with "doe" and "button buck" in both our county and statewide harvest summaries. This year, there were 25,836 button bucks harvested (Table 1). Statewide, button bucks accounted for 18% of the entire antlerless harvest. As a group, archers harvested only slightly fewer buttons, with just over 17% of their antlerless harvest composed of male fawns. Figure 4 contains a summary of the top and bottom 10 counties for button buck harvest by archers. Values represent the proportion of the antlerless harvest composed of buttons. Monroe County led the state with just under 11% of the antlerless harvest composed of button bucks. On the other hand, nearly one in three antlerless deer taken by archers in Henry County was a button buck.

In part, the difference between the rather wide gap between the top and bottom counties may be due to zone bag limits. With two exceptions, all top 10 counties are Zone C counties. Conversely, all of the bottom 10 counties were in Zone B. The additional harvest opportunities in Zone C may allow archers to be more discriminating there. Thus, to get a better sense for how archers are doing relative to gun hunters, a comparison of the button buck harvest proportion of archers with the same value for all seasons combined was made and then the counties were ranked according to the difference between these two estimates. Viewed in this manner, bowhunters in Muskingum County led the state last year with the widest gap between their button buck harvest and the county as a whole. As a group, Muskingum County hunters harvested 19 buttons for every 100 antlerless deer. Archers on the other hand, took just over 15 buttons per 100 antlerless deer in the bag. The top and bottom 10 counties are compared in Figure 5. Although the differences are small, among the bottom 10 counties, the proportion of buttons in the archery harvest was actually higher than that for the county as a whole.

Undoubtedly, some button bucks were mistakenly harvested for does. Aside from all of the other social and biological benefits of an early harvest, harvesting early in the season will help to minimize harvest errors because of the relatively large size difference between does and their fawns. However, as the season progresses, button bucks can easily be mistaken for young does. In these situations, hunters must rely on differences in physical appearances such as head shape and even behavioral differences (male fawns tend to be the lead deer in family groups) to distinguish button bucks from does. It is best to avoid taking lone antlerless deer. Male fawns tend to be more "adventuresome" than does, often times wandering off on their own. Additionally, a hunter lacks any frame of reference for gauging size with a lone deer. The best solution for hunters is to wait for a group and, if possible, take the largest antlerless deer in the group.

The Division of Wildlife remains committed to providing quality deer now and into the future. To accomplish this, we must harvest an adequate number of does each year to maintain the herd at a level that the habitat is capable of supporting in good to excellent condition. Through a combination of liberal bag limits, reduced cost antlerless deer permits, and other programmatic changes, including education on the importance of an adequate doe harvest, we have been successful in most regions of the state. Work remains, however. Managing the button buck harvest presents another opportunity to increase the doe harvest with little or no impact at all on opportunity. As a hunter,

you are in a position to help, especially if you are an archer. By reducing the proportion of button bucks in the harvest, you're helping to ensure that Ohio's deer program remains a model for the rest of the country.

AUTOMATED LICENSE SALES AND GAME CHECK SYSTEM

Beginning with the 2011-12 spring turkey season, licensed hunters were no longer required to present their turkey or deer at a check station for permanent tagging. Instead, both deer and turkey could be checked on-line, over the phone, or at any license vendor. In the case of the latter, the hunter was not required to present the game, simply the standard harvest information along with proper identification. Expectations were high, and for the most part, all were met or exceeded. As expected, a quarter of a million game check transactions revealed a few issues that no amount of simulations could. Many of these issues will be addressed in 2012-13 and others thereafter. Aside from the conveniences the automated license and game check system afforded our hunters and the time savings it created for DOW staff, our new license and game check system created opportunities to look at data in a manner that previously been impossible or very difficult at best. These new opportunities will allow us to offer products and licenses and permit packages that best suit our customer's needs.

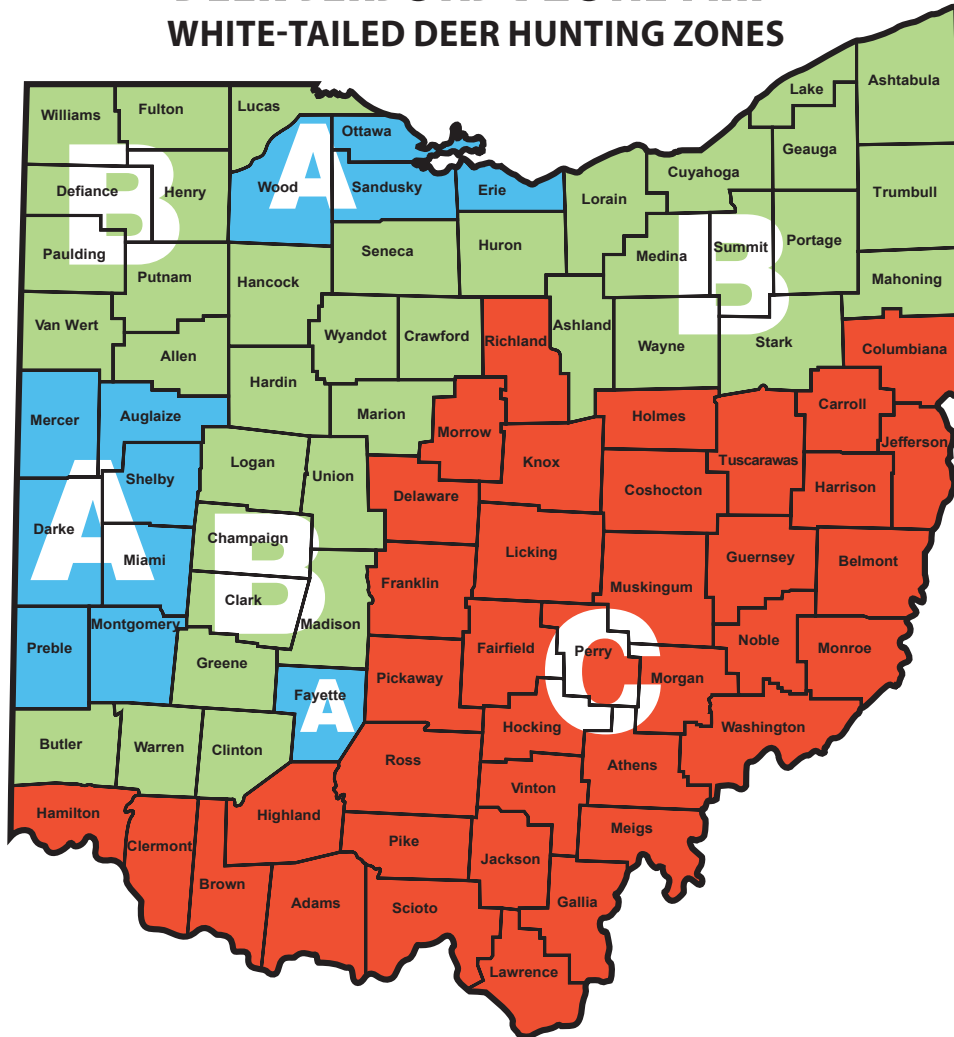
A survey of hunters that had an opportunity to test the new game check system before it went live in 2011 revealed that the majority of hunters believed that the new system would allow us to do a more effective job managing Ohio's deer herd, for two primary reasons. First, they recognized that the time spent collecting forms and distributing check station materials could be better spent managing game populations. Second, they felt that because of the convenience that it offered hunters, that we would get more and better data in a timelier manner. Accurate license and permit data notwithstanding, our new game check system has shed light on a number of issues related to the deer harvest data including the proportion of deer taken on public land, and by landowners and nonresident hunters. These data are summarized in Figure 6.

With nearly 80,000 acres of public land between the Wayne National Forest, Crown City Wildlife Area, and the Dean State Forest, Lawrence County held the top spot for public land deer harvest in the 2011-12 deer season. One third of the deer taken in Lawrence County were harvested on public land. This compares to 9% for the state as a whole. The remaining top five counties averaged 22% of the deer harvest taken on public land. Hamilton County has been conducting a very successful deer management program in a number of their parks and is likely the reason this "outlier" made the top five list. In addition to the top county for public land harvest, Lawrence County was a very productive place for nonresident hunters as well. This is not unexpected as public hunting lands are popular destinations for nonresident hunters. Nonresidents accounted for 5% of the county harvest on average. However, in Lawrence County, 16% of the deer harvest left the state. Athens County held the number two spot, while Pike, Morgan, and Adams counties tied for 3rd place at 14% each.

Landowners are not required to purchase a hunting license or deer or turkey permits to hunt on their property. However, by law, successful landowners must complete the game check process. Last year, landowners accounted for 22% of the reported harvest. Landowners would include both absentee as well as individuals residing on the property. Thus, factors such as amount of undeveloped land, proportion of county residents that hunt, and deer numbers are likely to affect the distribution of landowner harvest in the state. In 2011-12, landowners accounted for nearly half of the reported harvest from Meigs County. Washington, Monroe, Gallia, and Scioto counties rounded out the top five and ranged from 39% to 36% of the total reported harvest.

DEER SEASONS & ZONE MAP

WHITE-TAILED DEER HUNTING ZONES



A

A hunter may harvest no more than **two (2)** deer in **Zone A** during the 2011-2012 season. The antlerless deer permit is **NOT** valid in **Zone A** after Nov. 27, 2011.

B

A hunter may harvest no more than **four (4)** deer in **Zone B** during the 2011-2012 season. The antlerless deer permit is **NOT** valid in **Zone B** after Nov. 27, 2011.

C

A hunter may harvest no more than **six (6)** deer in **Zone C** during the 2011-2012 season. The antlerless deer permit is **NOT** valid in **Zone C** after Dec. 4, 2011.

Antlerless Deer Permit & Deer Permit Use by Zones 2011-2012							
Zone	Antlerless Deer Permit			Deer Permit			Total Bag Limit
	Opening Date	Closing Date	Use Limit	Opening Date	Closing Date	Use Limit	
A	Sept 24, 2011	Nov 27, 2011	1	Sept 24, 2011	Feb 5, 2012	1	No More Than Two (2)
B	Sept 24, 2011	Nov 27, 2011	2	Sept 24, 2011	Feb 5, 2012	2	No More Than Four (4)
C	Sept 24, 2011	Dec 4, 2011	3	Sept 24, 2011	Feb 5, 2012	3	No More Than Six (6)
Urban Units and Controlled Hunts	Sept 24, 2011	Feb 5, 2012	6	Sept 24, 2011	Feb 5, 2012	6	No More Than Six (6) Deer Total Using Any Combination
Antlerless Deer Permits will NOT be sold after November 27							

Figure 1. Ohio's 2011-12 deer zones and permit structure as presented in the *Ohio Hunting and Trapping Regulation*, Publication 5085.

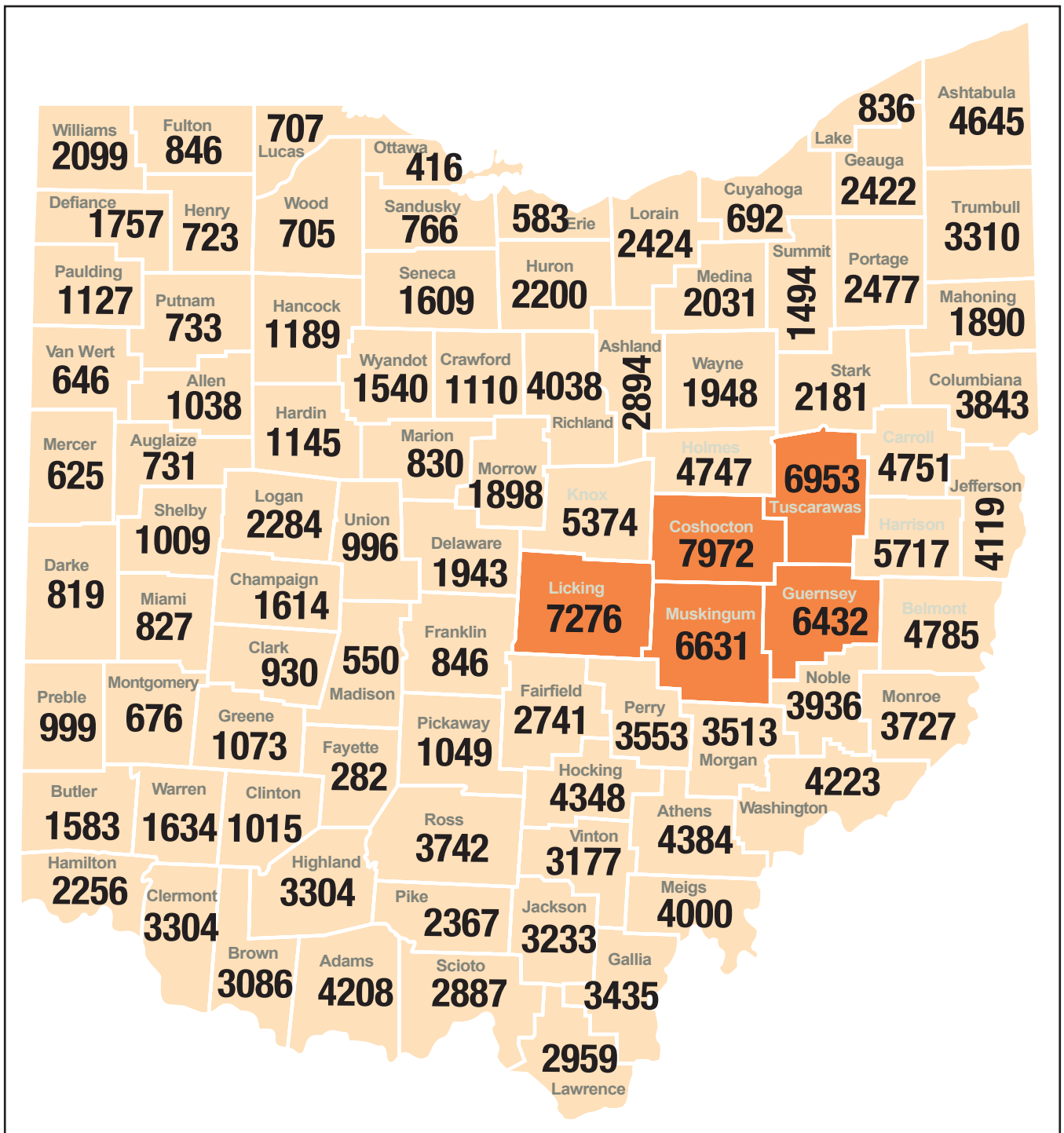


Figure 2. Ohio's 2011-12 deer harvest by county with the top five counties highlighted.

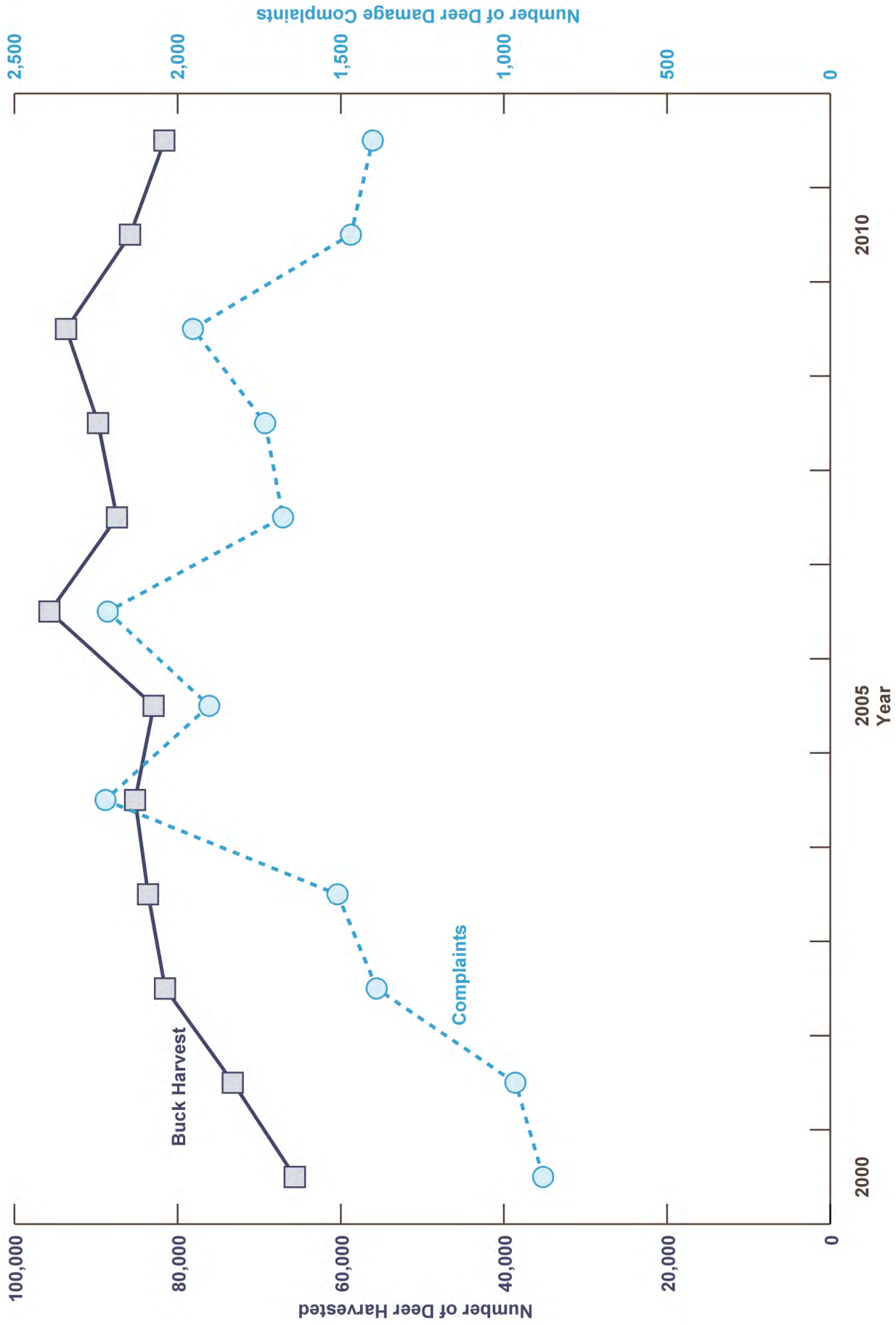


Figure 3. Statewide trends in deer damage complaints and statewide antlered buck harvest, 2000- present.

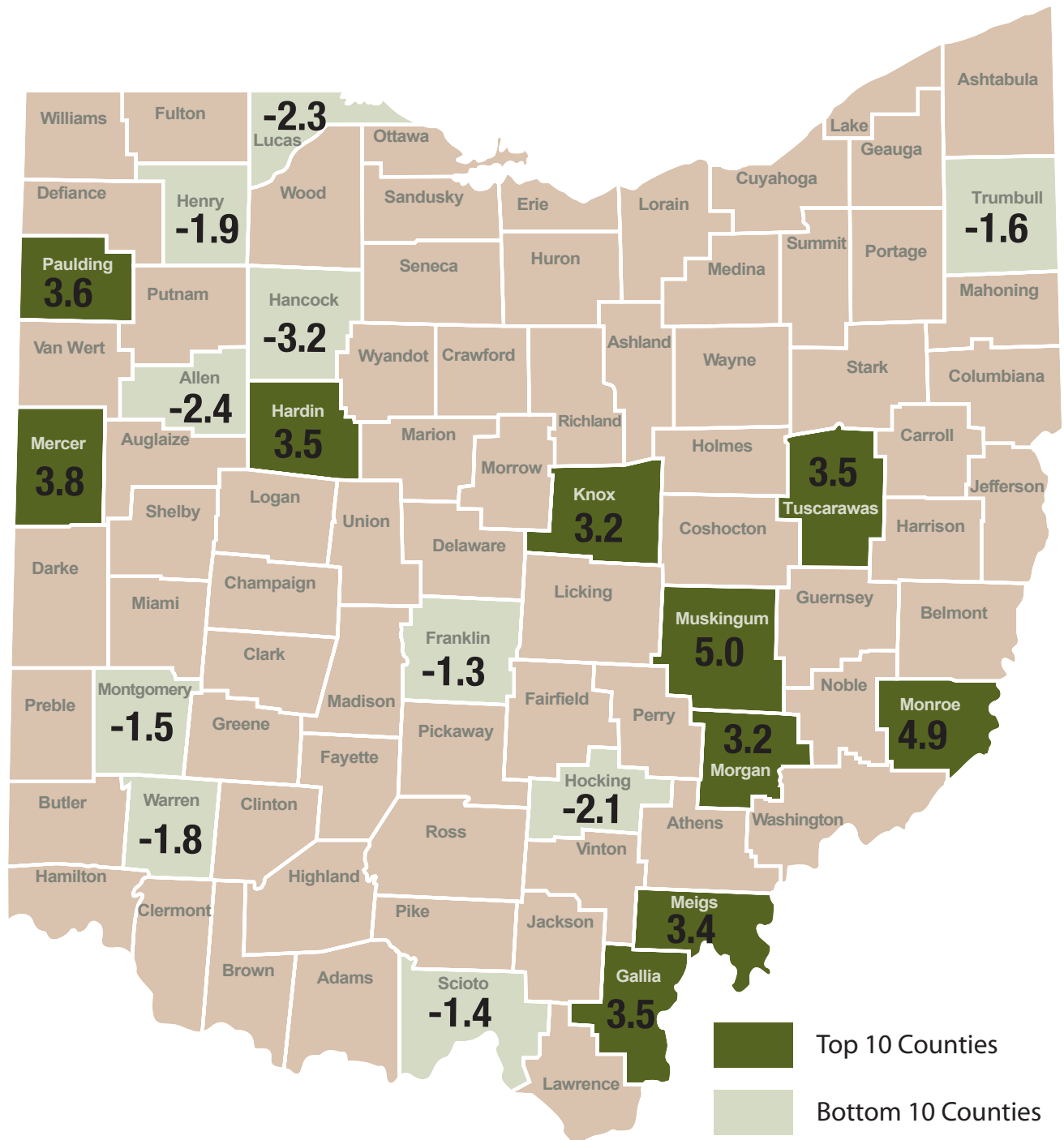


Figure 4. Difference in the proportion of button bucks in the county's total antlerless harvest vs. the archery harvest only. Large positive differences indicate that buttons account for a smaller proportion of the archery harvest than they do the total harvest in that county.

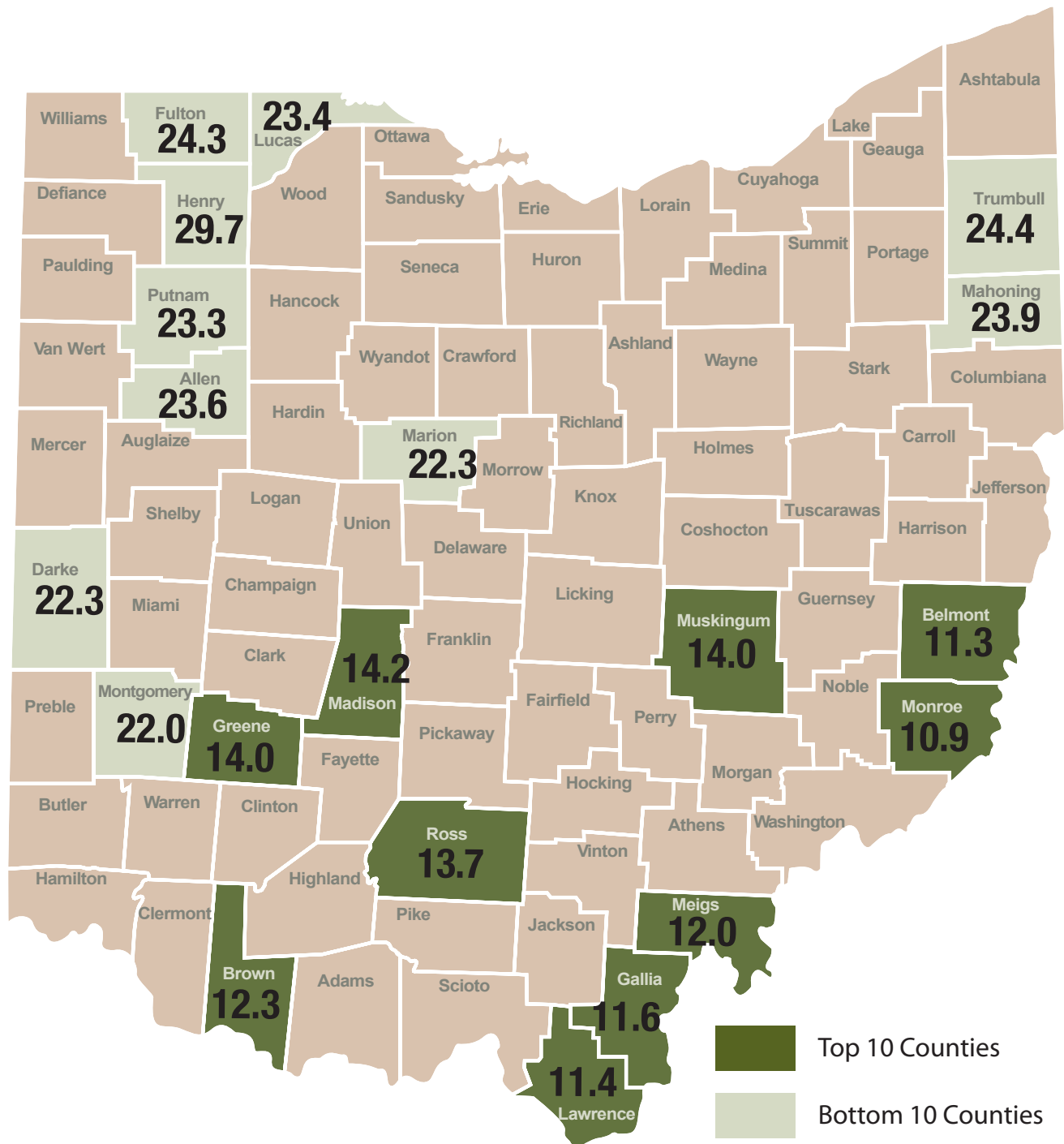
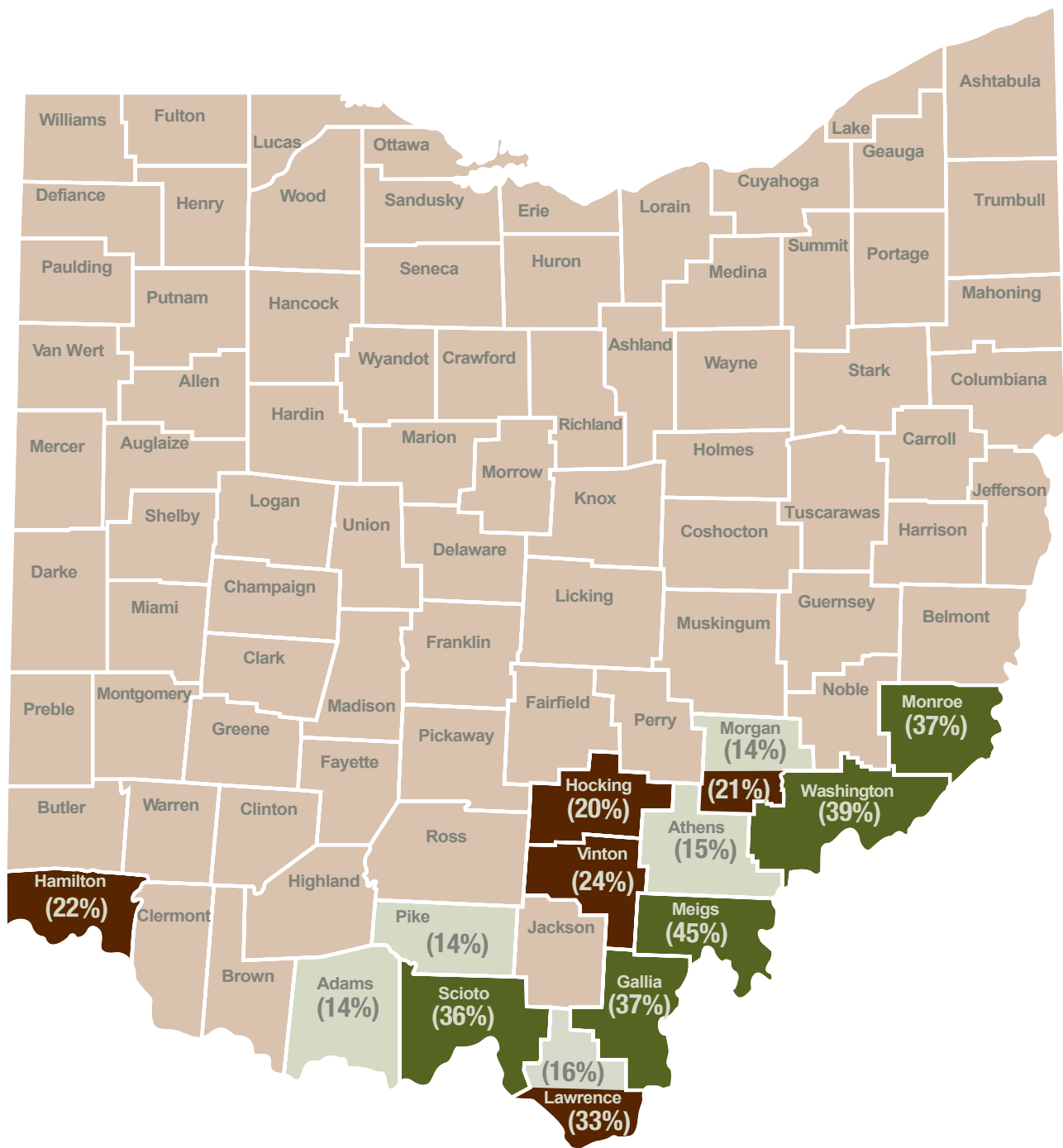


Figure 5. Proportion of the archery antlerless harvest composed of button bucks for the top and bottom 10 counties.



Top Five Counties

- (36%) Deer Harvested by Landowners (22%)
- (14%) Deer Harvested by Nonresident (5%)
- (33%) Deer Harvested on Public Land (9%)

Figure 6. Top 5 Ohio counties for percent (%) of deer harvested on public land, by landowners, and nonresident hunters. Statewide averages for each variable are shown in (parentheses). All values are for the 2011-12 deer season.

Table 1. Ohio's 2011-12 buck, doe, and button buck harvest by season.

Season	Bucks			Does			Button Bucks			Total		Change (%)
	2011-12	2010-11	2011-12	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	
Gun ¹	31,215	35,419	48,122	56,038	11,491	14,324	90,828	105,781	-14			
Bonus Gun	5,263	5,803	9,610	12,543	2,299	3,030	17,172	21,376	-20			
Gun	31,215	41,222	48,122	68,581	11,491	17,354	90,828	127,157	-29			
Crossbow	19,813	19,665	20,299	19,106	4,867	5,352	44,979	44,123	2			
Vertical Bow	15,426	16,274	18,709	20,209	3,618	4,406	37,753	40,889	-8			
Archery	35,239	35,939	39,008	39,315	8,485	9,758	82,732	85,012	-3			
Salt Fork ²	68	112	74	106	21	37	163	255	-36			
Wildcat Hollow ²	50	83	79	75	25	18	154	176	-13			
Shawnee ²	15	52	24	26	3	3	42	81	-48			
Statewide Muzzleloader ³	5,198	4,284	11,963	10,833	2,298	2,258	19,459	17,375	12			
Muzzleloader	5,331	4,531	12,140	11,040	2,347	2,316	19,818	17,887	11			
Statewide Youth	4,573	4,067	3,130	3,229	1,164	1,331	8,867	8,627	3			
NASA/Plumbrook	32	104	55	120	19	36	106	260	-59			
Ravenna Hunt	68	80	126	170	31	46	225	296	-24			
Season Total	81,721	86,017	112,191	122,569	25,836	30,889	219,748	239,475	-8			

¹Traditional gun season for deer of either sex, Nov. 28 - Dec. 4, 2011.

²Special early muzzleloader season Oct. 17-22, 2011.

³Statewide either-sex muzzleloader season Jan. 7-10, 2012.

Table 2. Ohio's 2011-12 buck, doe, and button buck harvest by season for the top five total harvest counties.

SEASON	COUNTY	BUCKS		DOES		BUTTON BUCKS		TOTAL		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	CHANGE
GUN	Coshocton	1,128	1,329	2,050	2,387	526	593	3,704	4,309	-14%
	Muskingum	1,043	1,122	1,721	2,113	467	492	3,231	3,727	-13%
	Tuscarawas	956	1,203	1,773	2,307	469	562	3,198	4,072	-21%
	Guernsey	994	1,056	1,620	1,799	404	480	3,018	3,335	-10%
	Harrison	915	1,142	1,536	1,943	328	495	2,779	3,580	-22%
BONUS GUN	Coshocton	158	205	363	574	79	160	600	939	-36%
	Tuscarawas	156	196	321	461	76	101	553	758	-27%
	Muskingum	159	164	288	356	66	85	513	605	-15%
	Licking	147	156	275	392	76	91	498	639	-22%
	Harrison	153	188	281	424	61	90	495	702	-29%
CROSS-BOW	Licking	723	692	840	792	175	200	1,738	1,684	3%
	Coshocton	589	617	667	627	155	135	1,411	1,379	2%
	Tuscarawas	542	554	581	524	123	130	1,246	1,208	3%
	Ashtabula	467	425	582	530	142	165	1,191	1,120	6%
	Guernsey	555	508	467	442	101	110	1,123	1,060	6%
VERTICAL BOW	Licking	560	598	751	835	136	169	1,447	1,602	-10%
	Coshocton	511	562	606	617	119	111	1,236	1,290	-4%
	Tuscarawas	431	414	532	660	78	91	1,041	1,165	-11%
	Muskingum	505	499	441	446	68	76	1,014	1,021	-1%
	Hamilton	270	275	608	545	125	107	1,003	927	8%
MUZZLE-LOADER	Coshocton	179	163	461	384	89	93	729	640	14%
	Licking	165	181	419	382	67	78	651	641	2%
	Muskingum	174	143	381	370	88	97	643	610	5%
	Guernsey	143	155	375	354	96	75	614	584	5%
	Tuscarawas	157	148	369	435	65	90	591	673	-12%
YOUTH	Tuscarawas	160	151	117	101	47	36	324	288	13%
	Guernsey	152	124	140	100	29	36	321	260	23%
	Coshocton	156	105	105	122	31	54	292	281	4%
	Muskingum	153	107	94	103	35	47	282	257	10%
	Holmes	140	102	100	102	38	32	278	236	18%
TOTAL	Coshocton	2,721	2,981	4,252	4,711	999	1,146	7,972	8,838	-10%
	Licking	2,591	2,668	3,832	4,147	853	1,007	7,276	7,822	-7%
	Tuscarawas	2,402	2,666	3,693	4,488	858	1,010	6,953	8,164	-15%
	Muskingum	2,518	2,470	3,319	3,777	794	880	6,631	7,127	-7%
	Guernsey	2,388	2,530	3,277	3,578	767	883	6,432	6,991	-8%

Table 3. Ohio's 2011-12 buck, doe, and button buck harvest by county and season.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Adams	Bonus Gun	109	98	186	167	34	42	329	307	7.2
	Gun	598	547	952	923	195	186	1,745	1,656	5.4
	Crossbow	294	314	332	251	75	62	701	627	11.8
	Vertical Bow	363	418	479	394	78	64	920	876	5.0
	Muzzleloader	110	86	196	181	33	30	339	297	14.1
	Youth	90	77	63	47	14	13	167	137	21.9
	Total	1,567	1,550	2,212	1,965	429	398	4,208	3,913	7.5
Allen	Bonus Gun	38	41	75	52	10	19	123	112	9.8
	Gun	107	166	144	192	43	81	294	439	-33.0
	Crossbow	119	116	109	130	36	45	264	291	-9.3
	Vertical Bow	76	114	122	171	37	44	235	329	-28.6
	Muzzleloader	27	20	41	35	10	5	78	60	30.0
	Youth	21	25	19	27	4	9	44	61	-27.9
	Total	388	482	510	607	140	203	1,038	1,292	-19.7
Ashland	Bonus Gun	66	93	159	214	34	68	259	375	-30.9
	Gun	396	478	569	673	140	206	1,105	1,357	-18.6
	Crossbow	287	296	278	296	70	87	635	679	-6.5
	Vertical Bow	206	213	216	263	46	67	468	543	-13.8
	Muzzleloader	70	73	195	140	30	42	295	255	15.7
	Youth	69	59	43	47	20	21	132	127	3.9
	Total	1,094	1,212	1,460	1,633	340	491	2,894	3,336	-13.2
Ashtabula	Bonus Gun	105	112	231	385	64	91	400	588	-32.0
	Gun	592	732	946	1,325	255	363	1,793	2,420	-25.9
	Crossbow	467	425	582	530	142	165	1,191	1,120	6.3
	Vertical Bow	260	277	360	385	92	112	712	774	-8.0
	Muzzleloader	82	54	230	184	68	52	380	290	31.0
	Youth	77	47	69	64	23	30	169	141	19.9
	Total	1,583	1,647	2,418	2,873	644	813	4,645	5,333	-12.9
Athens	Bonus Gun	104	111	204	218	31	28	339	357	-5.0
	Gun	706	712	1,098	1,193	260	257	2,064	2,162	-4.5
	Crossbow	305	249	221	182	53	45	579	476	21.6
	Vertical Bow	376	363	329	316	67	70	772	749	3.1
	Muzzleloader	140	98	274	253	46	36	460	387	18.9
	Youth	98	66	52	46	16	13	166	125	32.8
	Total	1,731	1,599	2,180	2,208	473	449	4,384	4,256	3.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Auglaize	Bonus Gun	33	19	39	28	16	13	88	60	46.7
	Gun	85	97	86	112	21	37	192	246	-22.0
	Crossbow	73	78	76	69	16	24	165	171	-3.5
	Vertical Bow	66	55	70	80	24	23	160	158	1.3
	Muzzleloader	36	19	42	18	9	8	87	45	93.3
	Youth	15	27	16	19	8	11	39	57	-31.6
	Total	308	295	329	326	94	116	731	737	-0.8
Belmont	Bonus Gun	121	144	248	323	54	69	423	536	-21.1
	Gun	834	964	1,366	1,493	244	312	2,444	2,769	-11.7
	Crossbow	310	356	284	234	43	43	637	633	0.6
	Vertical Bow	241	275	221	264	23	31	485	570	-14.9
	Muzzleloader	144	140	382	333	56	58	582	531	9.6
	Youth	132	108	61	83	21	17	214	208	2.9
	Total	1,782	1,987	2,562	2,730	441	530	4,785	5,247	-8.8
Brown	Bonus Gun	84	86	150	199	35	39	269	324	-17.0
	Gun	392	471	713	788	135	174	1,240	1,433	-13.5
	Crossbow	216	233	229	243	40	58	485	534	-9.2
	Vertical Bow	286	273	347	354	44	65	677	692	-2.2
	Muzzleloader	73	61	177	150	26	32	276	243	13.6
	Youth	82	99	41	40	16	14	139	153	-9.2
	Total	1,133	1,223	1,657	1,774	296	382	3,086	3,379	-8.7
Butler	Bonus Gun	34	40	61	52	12	10	107	102	4.9
	Gun	156	168	152	182	38	56	346	406	-14.8
	Crossbow	202	186	208	185	48	63	458	434	5.5
	Vertical Bow	184	194	248	289	58	74	490	557	-12.0
	Muzzleloader	42	30	70	54	19	14	131	98	33.7
	Youth	31	33	8	10	12	12	51	55	-7.3
	Total	649	651	747	772	187	229	1,583	1,652	-4.2
Carroll	Bonus Gun	123	170	276	331	64	93	463	594	-22.1
	Gun	717	884	1,273	1,645	274	440	2,264	2,969	-23.7
	Crossbow	368	439	372	349	82	113	822	901	-8.8
	Vertical Bow	236	245	298	325	51	63	585	633	-7.6
	Muzzleloader	118	88	262	273	43	68	423	429	-1.4
	Youth	98	86	71	67	25	42	194	195	-0.5
	Total	1,660	1,912	2,552	2,990	539	819	4,751	5,721	-17.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Champaign	Bonus Gun	35	35	79	97	19	19	133	151	-11.9
	Gun	228	237	275	302	51	72	554	611	-9.3
	Crossbow	145	121	168	163	31	58	344	342	0.6
	Vertical Bow	145	141	188	236	48	41	381	418	-8.9
	Muzzleloader	42	24	78	65	13	16	133	105	26.7
	Youth	34	35	26	24	9	18	69	77	-10.4
	Total	629	593	814	887	171	224	1,614	1,704	-5.3
Clark	Bonus Gun	20	21	50	49	7	10	77	80	-3.8
	Gun	113	120	132	135	33	40	278	295	-5.8
	Crossbow	102	102	82	90	12	29	196	221	-11.3
	Vertical Bow	98	98	136	142	29	34	263	274	-4.0
	Muzzleloader	23	13	43	41	10	3	76	57	33.3
	Youth	21	23	15	11	4	6	40	40	0.0
	Total	377	377	458	468	95	122	930	967	-3.8
Clermont	Bonus Gun	69	79	124	180	37	45	230	304	-24.3
	Gun	351	403	516	659	120	161	987	1,223	-19.3
	Crossbow	359	333	414	418	96	120	869	871	-0.2
	Vertical Bow	352	341	459	521	81	121	892	983	-9.3
	Muzzleloader	63	52	155	141	24	37	242	230	5.2
	Youth	49	65	28	35	7	12	84	112	-25.0
	Total	1,243	1,273	1,696	1,954	365	496	3,304	3,723	-11.3
Clinton	Bonus Gun	33	31	45	64	9	15	87	110	-20.9
	Gun	160	167	169	181	49	44	378	392	-3.6
	Crossbow	92	97	80	106	18	25	190	228	-16.7
	Vertical Bow	86	91	117	136	28	33	231	260	-11.2
	Muzzleloader	25	17	45	34	8	9	78	60	30.0
	Youth	36	35	11	13	4	5	51	53	-3.8
	Total	432	438	467	534	116	131	1,015	1,103	-8.0
Columbiana	Bonus Gun	115	131	179	238	38	81	332	450	-26.2
	Gun	561	769	941	1,288	251	359	1,753	2,416	-27.4
	Crossbow	385	366	327	302	90	104	802	772	3.9
	Vertical Bow	191	180	229	216	29	60	449	456	-1.5
	Muzzleloader	68	77	224	227	41	53	333	357	-6.7
	Youth	81	79	69	61	24	36	174	176	-1.1
	Total	1,401	1,602	1,969	2,332	473	693	3,843	4,627	-16.9

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Coshocton	Bonus Gun	158	205	363	574	79	160	600	939	-36.1
	Gun	1,128	1,329	2,050	2,387	526	593	3,704	4,309	-14.0
	Crossbow	589	617	667	627	155	135	1,411	1,379	2.3
	Vertical Bow	511	562	606	617	119	111	1,236	1,290	-4.2
	Muzzleloader	179	163	461	384	89	93	729	640	13.9
	Youth	156	105	105	122	31	54	292	281	3.9
	Total	2,721	2,981	4,252	4,711	999	1,146	7,972	8,838	-9.8
Crawford	Bonus Gun	25	29	56	63	13	9	94	101	-6.9
	Gun	164	248	218	225	60	96	442	569	-22.3
	Crossbow	97	104	85	118	28	39	210	261	-19.5
	Vertical Bow	72	61	97	97	20	26	189	184	2.7
	Muzzleloader	21	14	72	39	10	10	103	63	63.5
	Youth	44	25	21	20	7	14	72	59	22.0
	Total	423	481	549	562	138	194	1,110	1,237	-10.3
Cuyahoga	Bonus Gun		1	1	2	1	2		5	-100.0
	Gun	16	12	16	24	6	4	38	40	-5.0
	Crossbow	145	111	254	211	45	49	444	371	19.7
	Vertical Bow	56	42	121	132	25	33	202	207	-2.4
	Muzzleloader	0	1	4	3	1	1	5	5	0
	Youth	1	0	0	0	0	1	1	1	0
	Total	218	167	396	372	78	90	692	629	10.0
Darke	Bonus Gun	23	31	43	42	9	11	75	84	-10.7
	Gun	85	117	111	112	28	38	224	267	-16.1
	Crossbow	89	83	111	109	25	26	225	218	3.2
	Vertical Bow	75	76	83	94	31	30	189	200	-5.5
	Muzzleloader	16	5	36	21	10	2	62	28	121.4
	Youth	26	20	13	23	5	4	44	47	-6.4
	Total	314	332	397	401	108	111	819	844	-3.0
Defiance	Bonus Gun	55	49	95	110	25	35	175	194	-9.8
	Gun	261	354	363	421	103	148	727	923	-21.2
	Crossbow	118	118	145	161	48	40	311	319	-2.5
	Vertical Bow	99	105	175	238	34	48	308	391	-21.2
	Muzzleloader	34	29	76	86	30	12	140	127	10.2
	Youth	47	31	39	41	10	16	96	88	9.1
	Total	614	686	893	1,057	250	299	1,757	2,042	-14.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Delaware	Bonus Gun	43	50	85	109	22	18	150	177	-15.3
	Gun	177	228	317	370	102	103	596	701	-15.0
	Crossbow	205	237	261	251	76	78	542	566	-4.2
	Vertical Bow	143	198	254	252	49	72	446	522	-14.6
	Muzzleloader	41	20	80	77	21	14	142	111	27.9
	Youth	33	31	27	8	7	7	67	46	45.7
	Total	642	764	1,024	1,067	277	292	1,943	2,123	-8.5
Erie	Bonus Gun	9	25	16	44	7	13	32	82	-61.0
	Gun	52	60	73	64	13	27	138	151	-8.6
	Crossbow	105	121	101	91	16	34	222	246	-9.8
	Vertical Bow	47	46	58	57	19	19	124	122	1.6
	Muzzleloader	18	6	21	19	4	5	43	30	43.3
	Youth	14	4	8	5	2	3	24	12	100.0
	Total	245	262	277	280	61	101	583	643	-9.3
Fairfield	Bonus Gun	52	104	102	174	28	51	182	329	-44.7
	Gun	394	425	620	661	144	179	1,158	1,265	-8.5
	Crossbow	233	220	266	220	66	56	565	496	13.9
	Vertical Bow	223	265	262	292	42	61	527	618	-14.7
	Muzzleloader	62	56	128	155	28	22	218	233	-6.4
	Youth	52	47	28	48	11	23	91	118	-22.9
	Total	1,016	1,117	1,406	1,550	319	392	2,741	3,059	-10.4
Fayette	Bonus Gun	9	9	13	15	1	6	23	30	-23.3
	Gun	53	64	38	37	13	16	104	117	-11.1
	Crossbow	30	40	24	25	3	11	57	76	-25.0
	Vertical Bow	31	43	19	17	6	6	56	66	-15.2
	Muzzleloader	10	12	15	13	2	3	27	28	-3.6
	Youth	9	11	5	5	1	0	15	16	-6.3
	Total	142	179	114	112	26	42	282	333	-15.3
Franklin	Bonus Gun	15	20	32	32	3	5	50	57	-12.3
	Gun	70	56	85	68	16	19	171	143	19.6
	Crossbow	122	129	135	104	27	28	284	261	8.8
	Vertical Bow	109	119	138	173	33	26	280	318	-11.9
	Muzzleloader	11	9	29	20	6	7	46	36	27.8
	Youth	7	8	8	4		2		14	-100.0
	Total	334	341	427	401	85	87	846	829	2.1

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Fulton	Bonus Gun	37	30	43	60	10	12	90	102	-11.8
	Gun	108	197	149	167	46	78	303	442	-31.4
	Crossbow	69	65	73	74	26	23	168	162	3.7
	Vertical Bow	72	61	91	115	27	39	190	215	-11.6
	Muzzleloader	23	20	27	25	9	10	59	55	7.3
	Youth	15	22	11	20	10	11	36	53	-32.1
	Total	324	395	394	461	128	173	846	1,029	-17.8
Gallia	Bonus Gun	91	69	122	207	24	33	237	309	-23.3
	Gun	603	636	1,025	1,112	219	166	1,847	1,914	-3.5
	Crossbow	209	203	209	178	24	32	442	413	7.0
	Vertical Bow	212	223	207	221	32	31	451	475	-5.1
	Muzzleloader	79	74	232	226	23	29	334	329	1.5
	Youth	71	54	40	45	13	17	124	116	6.9
	Total	1,265	1,259	1,835	1,989	335	308	3,435	3,556	-3.4
Geauga	Bonus Gun	37	28	102	91	27	29	166	148	12.2
	Gun	196	244	338	376	93	124	627	744	-15.7
	Crossbow	346	300	419	362	94	120	859	782	9.8
	Vertical Bow	175	182	290	312	75	90	540	584	-7.5
	Muzzleloader	43	33	95	99	22	17	160	149	7.4
	Youth	35	21	24	28	11	7	70	56	25.0
	Total	832	808	1,268	1,268	322	387	2,422	2,463	-1.7
Greene	Bonus Gun	23	18	43	45	9	11	75	74	1.4
	Gun	125	106	139	156	25	38	289	300	-3.7
	Crossbow	148	117	159	130	33	42	340	289	17.6
	Vertical Bow	111	124	141	159	17	26	269	309	-12.9
	Muzzleloader	13	15	46	41	10	7	69	63	9.5
	Youth	15	18	11	15	5	6	31	39	-20.5
	Total	435	399	539	546	99	130	1,073	1,075	-0.2
Guernsey	Bonus Gun	140	181	249	370	63	73	452	624	-27.6
	Gun	994	1,056	1,620	1,799	404	480	3,018	3,335	-9.5
	Crossbow	555	508	467	442	101	110	1,123	1,060	5.9
	Vertical Bow	336	395	352	408	53	72	741	875	-15.3
	Muzzleloader	143	155	375	354	96	75	614	584	5.1
	Youth	152	124	140	100	29	36	321	260	23.5
	Total	2,388	2,530	3,277	3,578	767	883	6,432	6,991	-8.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Hamilton	Bonus Gun	19	27	60	55	16	12	95	94	1.1
	Gun	90	93	173	173	36	50	299	316	-5.4
	Crossbow	261	260	408	356	80	92	749	708	5.8
	Vertical Bow	270	275	608	545	125	107	1,003	927	8.2
	Muzzleloader	19	26	60	50	11	6	90	82	9.8
	Youth	9	2	7	11	4	2	20	15	33.3
	Total	668	683	1,316	1,190	272	269	2,256	2,142	5.3
Hancock	Bonus Gun	58	28	79	51	10	28	147	107	37.4
	Gun	151	236	205	271	47	75	403	582	-30.8
	Crossbow	102	123	93	123	33	38	228	284	-19.7
	Vertical Bow	109	118	111	172	25	36	245	326	-24.8
	Muzzleloader	29	19	70	44	13	14	112	77	45.5
	Youth	23	45	23	29	8	15	54	89	-39.3
	Total	472	569	581	690	136	206	1,189	1,465	-18.8
Hardin	Bonus Gun	33	28	58	71	14	21	105	120	-12.5
	Gun	142	232	154	261	58	82	354	575	-38.4
	Crossbow	83	100	120	101	29	32	232	233	-0.4
	Vertical Bow	85	82	146	168	28	52	259	302	-14.2
	Muzzleloader	43	19	81	48	21	10	145	77	88.3
	Youth	20	29	23	25	7	13	50	67	-25.4
	Total	406	490	582	674	157	210	1,145	1,374	-16.7
Harrison	Bonus Gun	153	188	281	424	61	90	495	702	-29.5
	Gun	915	1,142	1,536	1,943	328	495	2,779	3,580	-22.4
	Crossbow	429	494	419	440	82	99	930	1,033	-10.0
	Vertical Bow	318	346	340	385	50	56	708	787	-10.0
	Muzzleloader	144	138	378	396	52	92	574	626	-8.3
	Youth	110	94	103	111	18	32	231	237	-2.5
	Total	2,069	2,402	3,057	3,699	591	864	5,717	6,965	-17.9
Henry	Bonus Gun	38	23	44	24	15	23	97	70	38.6
	Gun	120	208	114	231	48	68	282	507	-44.4
	Crossbow	48	52	39	59	18	20	105	131	-19.8
	Vertical Bow	59	42	56	85	23	16	138	143	-3.5
	Muzzleloader	26	12	33	19	11	10	70	41	70.7
	Youth	9	21	15	21	7	6	31	48	-35.4
	Total	300	358	301	439	122	143	723	940	-23.1

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Highland	Bonus Gun	81	100	146	168	43	32	270	300	-10.0
	Gun	484	488	783	836	170	216	1,437	1,540	-6.7
	Crossbow	241	246	258	254	69	68	568	568	0.0
	Vertical Bow	235	250	304	331	66	63	605	644	-6.1
	Muzzleloader	75	66	179	154	29	28	283	248	14.1
	Youth	77	73	50	54	14	8	141	135	4.4
	Total	1,193	1,223	1,720	1,797	391	415	3,304	3,435	-3.8
Hocking	Bonus Gun	79	95	165	204	42	35	286	334	-14.4
	Gun	736	735	1,189	1,147	262	273	2,187	2,155	1.5
	Crossbow	326	290	276	240	70	61	672	591	13.7
	Vertical Bow	318	296	260	294	71	68	649	658	-1.4
	Muzzleloader	108	85	240	207	36	36	384	328	17.1
	Youth	96	81	54	56	20	18	170	155	9.7
	Total	1,663	1,582	2,184	2,148	501	491	4,348	4,221	3.0
Holmes	Bonus Gun	89	113	183	294	41	67	313	474	-34.0
	Gun	553	693	1,193	1,473	276	388	2,022	2,554	-20.8
	Crossbow	396	494	471	475	100	124	967	1,093	-11.5
	Vertical Bow	278	313	428	531	70	83	776	927	-16.3
	Muzzleloader	87	76	259	219	45	56	391	351	11.4
	Youth	140	102	100	102	38	32	278	236	17.8
	Total	1,543	1,791	2,634	3,094	570	750	4,747	5,635	-15.8
Huron	Bonus Gun	61	56	108	145	34	58	203	259	-21.6
	Gun	365	372	442	487	122	153	929	1,012	-8.2
	Crossbow	186	181	203	217	53	55	442	453	-2.4
	Vertical Bow	111	123	203	151	44	61	358	335	6.9
	Muzzleloader	42	31	105	94	26	31	173	156	10.9
	Youth	41	45	31	36	23	20	95	101	-5.9
	Total	806	808	1,092	1,130	302	378	2,200	2,316	-5.0
Jackson	Bonus Gun	62	58	126	116	29	33	217	207	4.8
	Gun	519	557	829	978	168	217	1,516	1,752	-13.5
	Crossbow	251	271	253	251	42	53	546	575	-5.0
	Vertical Bow	233	283	260	255	49	49	542	587	-7.7
	Muzzleloader	80	67	179	186	24	23	283	276	2.5
	Youth	64	42	47	37	18	15	129	94	37.2
	Total	1,209	1,278	1,694	1,823	330	390	3,233	3,491	-7.4

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Jefferson	Bonus Gun	125	129	221	270	38	42	384	441	-12.9
	Gun	734	910	1,126	1,390	196	280	2,056	2,580	-20.3
	Crossbow	295	351	225	253	42	31	562	635	-11.5
	Vertical Bow	236	312	198	254	37	40	471	606	-22.3
	Muzzleloader	133	104	295	302	42	51	470	457	2.8
	Youth	104	89	57	53	15	19	176	161	9.3
	Total	1,627	1,895	2,122	2,522	370	463	4,119	4,880	-15.6
Knox	Bonus Gun	87	135	223	333	74	87	384	555	-30.8
	Gun	760	923	1,336	1,722	395	507	2,491	3,152	-21.0
	Crossbow	345	350	409	482	120	132	874	964	-9.3
	Vertical Bow	361	336	494	548	76	101	931	985	-5.5
	Muzzleloader	96	97	314	278	64	77	474	452	4.9
	Youth	113	100	73	103	34	25	220	228	-3.5
	Total	1,762	1,941	2,849	3,466	763	929	5,374	6,336	-15.2
Lake	Bonus Gun	10	16	30	38	7	6	47	60	-21.7
	Gun	55	50	102	99	29	33	186	182	2.2
	Crossbow	152	135	199	149	34	42	385	326	18.1
	Vertical Bow	50	64	89	82	30	29	169	175	-3.4
	Muzzleloader	6	0	30	23	6	3	42	26	61.5
	Youth	5	8	0	5	2	1	7	14	-50.0
	Total	278	273	450	396	108	114	836	783	6.8
Lawrence	Bonus Gun	66	78	119	139	23	20	208	237	-12.2
	Gun	588	524	851	823	139	112	1,578	1,459	8.2
	Crossbow	203	181	150	118	21	17	374	316	18.4
	Vertical Bow	234	259	180	200	22	25	436	484	-9.9
	Muzzleloader	89	80	109	140	23	21	221	241	-8.3
	Youth	82	55	43	37	17	14	142	106	34.0
	Total	1,262	1,177	1,452	1,457	245	209	2,959	2,843	4.1
Licking	Bonus Gun	147	156	275	392	76	91	498	639	-22.1
	Gun	864	925	1,463	1,672	362	431	2,689	3,028	-11.2
	Crossbow	723	692	840	792	175	200	1,738	1,684	3.2
	Vertical Bow	560	598	751	835	136	169	1,447	1,602	-9.7
	Muzzleloader	165	181	419	382	67	78	651	641	1.6
	Youth	132	116	84	74	37	38	253	228	11.0
	Total	2,591	2,668	3,832	4,147	853	1,007	7,276	7,822	-7.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Logan	Bonus Gun	63	60	108	91	34	37	205	188	9.0
	Gun	286	293	379	409	98	149	763	851	-10.3
	Crossbow	188	179	234	200	60	78	482	457	5.5
	Vertical Bow	217	189	288	310	44	90	549	589	-6.8
	Muzzleloader	60	31	100	80	19	22	179	133	34.6
	Youth	49	52	38	30	19	15	106	97	9.3
	Total	863	804	1,147	1,120	274	391	2,284	2,315	-1.3
Lorain	Bonus Gun	48	70	108	148	21	47	177	265	-33.2
	Gun	245	297	406	443	94	135	745	875	-14.9
	Crossbow	360	409	403	413	110	136	873	958	-8.9
	Vertical Bow	136	137	194	195	50	66	380	398	-4.5
	Muzzleloader	44	34	103	102	22	21	169	157	7.6
	Youth	35	36	35	42	10	13	80	91	-12.1
	Total	868	983	1,249	1,343	307	418	2,424	2,744	-11.7
Lucas	Bonus Gun	7	8	19	26	5	6	31	40	-22.5
	Gun	55	51	67	90	9	28	131	169	-22.5
	Crossbow	102	94	153	97	50	39	305	230	32.6
	Vertical Bow	72	80	99	94	28	35	199	209	-4.8
	Muzzleloader	6	6	22	16	4	4	32	26	23.1
	Youth	4	4	3	1	2	0	9	5	80.0
	Total	246	243	363	324	98	112	707	679	4.1
Madison	Bonus Gun	25	22	25	38	5	7	55	67	-17.9
	Gun	81	84	71	81	17	22	169	187	-9.6
	Crossbow	48	55	44	31	12	15	104	101	3.0
	Vertical Bow	60	67	76	80	8	15	144	162	-11.1
	Muzzleloader	24	11	23	27	4	2	51	40	27.5
	Youth	14	18	11	15	2	2	27	35	-22.9
	Total	252	257	250	272	48	63	550	592	-7.1
Mahoning	Bonus Gun	53	46	92	106	35	39	180	191	-5.8
	Gun	202	236	273	343	96	96	571	675	-15.4
	Crossbow	261	282	270	224	96	83	627	589	6.5
	Vertical Bow	107	113	147	144	38	49	292	306	-4.6
	Muzzleloader	37	24	101	68	19	24	157	116	35.3
	Youth	23	21	23	21	17	11	63	53	18.9
	Total	683	722	906	906	301	302	1,890	1,930	-2.1

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Marion	Bonus Gun	23	44	44	46	13	19	80	109	-26.6
	Gun	140	182	136	206	45	45	321	433	-25.9
	Crossbow	91	88	60	70	19	24	170	182	-6.6
	Vertical Bow	70	63	65	77	18	18	153	158	-3.2
	Muzzleloader	22	16	38	27	6	6	66	49	34.7
	Youth	19	15	12	12	9	6	40	33	21.2
	Total	365	408	355	438	110	118	830	964	-13.9
Medina	Bonus Gun	49	65	90	115	24	34	163	214	-23.8
	Gun	199	233	271	301	88	104	558	638	-12.5
	Crossbow	314	314	339	315	85	107	738	736	0.3
	Vertical Bow	154	133	172	188	43	58	369	379	-2.6
	Muzzleloader	37	26	82	68	27	17	146	111	31.5
	Youth	26	20	20	18	11	6	57	44	29.5
	Total	779	791	974	1,005	278	326	2,031	2,122	-4.3
Meigs	Bonus Gun	92	105	148	214	37	40	277	359	-22.8
	Gun	715	677	1,061	1,064	199	206	1,975	1,947	1.4
	Crossbow	260	242	243	194	35	32	538	468	15.0
	Vertical Bow	289	290	250	267	34	34	573	591	-3.0
	Muzzleloader	114	113	296	303	59	47	469	463	1.3
	Youth	93	68	57	59	18	20	168	147	14.3
	Total	1,563	1,495	2,055	2,101	382	379	4,000	3,975	0.6
Mercer	Bonus Gun	25	10	22	29	10	12	57	51	11.8
	Gun	70	112	104	101	31	37	205	250	-18.0
	Crossbow	50	38	61	63	10	18	121	119	1.7
	Vertical Bow	54	47	81	88	22	25	157	160	-1.9
	Muzzleloader	18	7	25	7	9	5	52	19	173.7
	Youth	11	30	15	19	7	4	33	53	-37.7
	Total	228	244	308	307	89	101	625	652	-4.1
Miami	Bonus Gun	29	15	36	31	7	13	72	59	22.0
	Gun	85	102	90	87	19	27	194	216	-10.2
	Crossbow	118	118	112	120	33	36	263	274	-4.0
	Vertical Bow	81	81	107	135	23	34	211	250	-15.6
	Muzzleloader	19	5	32	16	10	5	61	26	134.6
	Youth	11	21	8	11	7	8	26	40	-35.0
	Total	343	342	385	400	99	123	827	865	-4.4

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Monroe	Bonus Gun	93	96	161	230	31	42	285	368	-22.6
	Gun	680	723	1,045	1,224	238	252	1,963	2,199	-10.7
	Crossbow	281	236	246	200	34	35	561	471	19.1
	Vertical Bow	137	165	163	177	18	35	318	377	-15.6
	Muzzleloader	106	93	272	284	46	46	424	423	0.2
	Youth	101	76	64	56	11	21	176	153	15.0
	Total	1,398	1,389	1,951	2,171	378	431	3,727	3,991	-6.6
Montgomery	Bonus Gun	9	10	12	15	1	1	22	26	-15.4
	Gun	69	61	62	36	14	22	145	119	21.8
	Crossbow	97	93	115	92	29	35	241	220	9.5
	Vertical Bow	75	78	105	140	34	27	214	245	-12.7
	Muzzleloader	10	17	26	14	5	1	41	32	28.1
	Youth	7	14	4	4	2	3	13	21	-38.1
	Total	267	273	324	301	85	89	676	663	2.0
Morgan	Bonus Gun	78	92	140	180	26	46	244	318	-23.3
	Gun	600	675	954	1,042	272	253	1,826	1,970	-7.3
	Crossbow	174	173	160	139	52	40	386	352	9.7
	Vertical Bow	224	255	223	184	27	41	474	480	-1.3
	Muzzleloader	111	105	190	215	46	41	347	361	-3.9
	Youth	74	49	46	43	23	27	143	119	20.2
	Total	1,287	1,401	1,765	1,859	461	464	3,513	3,724	-5.7
Morrow	Bonus Gun	38	54	73	120	21	31	132	205	-35.6
	Gun	281	349	451	484	123	177	855	1,010	-15.3
	Crossbow	173	192	159	168	43	59	375	419	-10.5
	Vertical Bow	129	131	148	142	43	41	320	314	1.9
	Muzzleloader	50	22	77	72	16	13	143	107	33.6
	Youth	42	45	17	30	14	13	73	88	-17.0
	Total	713	793	925	1,016	260	334	1,898	2,143	-11.4
Muskingum	Bonus Gun	159	164	288	356	66	85	513	605	-15.2
	Gun	1,043	1,122	1,721	2,113	467	492	3,231	3,727	-13.3
	Crossbow	484	435	394	388	70	83	948	906	4.6
	Vertical Bow	505	499	441	446	68	76	1,014	1,021	-0.7
	Muzzleloader	174	143	381	370	88	97	643	610	5.4
	Youth	153	107	94	103	35	47	282	257	9.7
	Total	2,518	2,470	3,319	3,777	794	880	6,631	7,127	-7.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Noble	Bonus Gun	84	117	167	272	29	46	280	435	-35.6
	Gun	700	742	1,100	1,219	234	279	2,034	2,240	-9.2
	Crossbow	307	265	245	225	45	56	597	546	9.3
	Vertical Bow	220	226	198	190	32	64	450	480	-6.3
	Muzzleloader	94	94	257	221	40	46	391	361	8.3
	Youth	95	78	68	62	21	21	184	161	14.3
	Total	1,500	1,522	2,035	2,189	401	512	3,936	4,223	-6.8
Ottawa	Bonus Gun	10	16	18	29	5	8	33	53	-37.7
	Gun	43	38	31	35	7	15	81	88	-8.0
	Crossbow	75	81	67	53	20	21	162	155	4.5
	Vertical Bow	26	34	42	41	8	13	76	88	-13.6
	Muzzleloader	12	2	23	6	4	1	39	9	333.3
	Youth	14	5	8	4	3	2	25	11	127.3
	Total	180	176	189	168	47	60	416	404	3.0
Paulding	Bonus Gun	35	34	73	77	16	33	124	144	-13.9
	Gun	166	213	194	304	58	97	418	614	-31.9
	Crossbow	59	68	111	119	27	31	197	218	-9.6
	Vertical Bow	57	89	129	155	15	44	201	288	-30.2
	Muzzleloader	37	19	71	54	14	13	122	86	41.9
	Youth	26	39	31	36	8	16	65	91	-28.6
	Total	380	462	609	745	138	234	1,127	1,441	-21.8
Perry	Bonus Gun	73	92	124	230	32	49	229	371	-38.3
	Gun	595	657	1,001	1,178	242	298	1,838	2,133	-13.8
	Crossbow	249	243	195	149	60	38	504	430	17.2
	Vertical Bow	185	207	212	205	50	42	447	454	-1.5
	Muzzleloader	80	64	196	183	58	53	334	300	11.3
	Youth	81	62	53	54	10	20	144	136	5.9
	Total	1,285	1,356	1,806	2,018	462	502	3,553	3,876	-8.3
Pickaway	Bonus Gun	31	30	56	64	8	15	95	109	-12.8
	Gun	187	211	238	274	42	86	467	571	-18.2
	Crossbow	101	96	74	81	17	17	192	194	-1.0
	Vertical Bow	94	90	84	110	11	18	189	218	-13.3
	Muzzleloader	19	15	48	37	6	7	73	59	23.7
	Youth	22	29	10	14	1	7	33	50	-34.0
	Total	454	471	510	580	85	150	1,049	1,201	-12.7

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Pike	Bonus Gun	50	63	87	101	25	17	162	181	-10.5
	Gun	409	407	557	594	114	108	1,080	1,109	-2.6
	Crossbow	203	209	172	145	31	37	406	391	3.8
	Vertical Bow	208	203	167	176	32	19	407	398	2.3
	Muzzleloader	60	43	141	96	18	23	219	162	35.2
	Youth	50	35	36	23	7	5	93	63	47.6
	Total	980	960	1,160	1,135	227	209	2,367	2,304	2.7
Portage	Bonus Gun	53	50	92	102	28	22	173	174	-0.6
	Gun	246	260	303	357	100	132	649	749	-13.4
	Crossbow	397	357	430	373	122	131	949	861	10.2
	Vertical Bow	154	187	222	215	50	55	426	457	-6.8
	Muzzleloader	48	29	107	82	28	27	183	138	32.6
	Youth	34	21	43	18	20	11	97	50	94.0
	Total	932	904	1,197	1,147	348	378	2,477	2,429	2.0
Preble	Bonus Gun	30	33	34	44	9	11	73	88	-17.0
	Gun	129	114	103	100	35	39	267	253	5.5
	Crossbow	111	97	105	121	31	27	247	245	0.8
	Vertical Bow	119	83	137	115	25	32	281	230	22.2
	Muzzleloader	32	18	47	41	8	6	87	65	33.8
	Youth	22	30	14	17	8	12	44	59	-25.4
	Total	443	375	440	438	116	127	999	940	6.3
Putnam	Bonus Gun	28	25	38	28	13	13	79	66	19.7
	Gun	108	168	106	150	25	46	239	364	-34.3
	Crossbow	79	67	68	84	26	39	173	190	-8.9
	Vertical Bow	49	65	70	101	16	26	135	192	-29.7
	Muzzleloader	19	1	27	15	10	3	56	19	194.7
	Youth	24	32	19	40	8	14	51	86	-40.7
	Total	307	358	328	418	98	141	733	917	-20.1
Richland	Bonus Gun	74	106	164	254	60	50	298	410	-27.3
	Gun	499	600	951	1,202	272	366	1,722	2,168	-20.6
	Crossbow	401	425	403	455	124	130	928	1,010	-8.1
	Vertical Bow	225	250	342	374	76	85	643	709	-9.3
	Muzzleloader	74	54	180	180	42	43	296	277	6.9
	Youth	71	53	52	44	28	24	151	121	24.8
	Total	1,344	1,488	2,092	2,509	602	698	4,038	4,695	-14.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Ross	Bonus Gun	96	122	149	184	28	40	273	346	-21.1
	Gun	673	664	863	937	193	196	1,729	1,797	-3.8
	Crossbow	300	316	269	229	44	41	613	586	4.6
	Vertical Bow	285	335	252	274	41	47	578	656	-11.9
	Muzzleloader	100	72	252	224	41	33	393	329	19.5
	Youth	99	84	43	45	14	21	156	150	4.0
	Total	1,553	1,593	1,828	1,893	361	378	3,742	3,864	-3.2
Sandusky	Bonus Gun	25	28	26	47	9	8	60	83	-27.7
	Gun	91	104	82	71	23	37	196	212	-7.5
	Crossbow	123	103	122	124	39	39	284	266	6.8
	Vertical Bow	54	65	62	59	12	20	128	144	-11.1
	Muzzleloader	20	20	43	37	10	3	73	60	21.7
	Youth	8	15	12	10	5	8	25	33	-24.2
	Total	321	335	347	348	98	115	766	798	-4.0
Scioto	Bonus Gun	85	59	119	174	25	27	229	260	-11.9
	Gun	449	441	671	723	107	92	1,227	1,256	-2.3
	Crossbow	246	203	189	150	34	28	469	381	23.1
	Vertical Bow	282	274	236	213	44	34	562	521	7.9
	Muzzleloader	87	63	173	144	20	17	280	224	25.0
	Youth	43	43	38	45	4	11	85	99	-14.1
	Total	1,204	1,125	1,446	1,473	237	211	2,887	2,809	2.8
Seneca	Bonus Gun	47	48	77	120	36	36	160	204	-21.6
	Gun	239	322	292	418	73	114	604	854	-29.3
	Crossbow	165	189	154	174	49	55	368	418	-12.0
	Vertical Bow	107	107	131	137	25	44	263	288	-8.7
	Muzzleloader	33	35	89	67	21	17	143	119	20.2
	Youth	25	37	35	53	11	15	71	105	-32.4
	Total	616	738	778	969	215	281	1,609	1,988	-19.1
Shelby	Bonus Gun	39	29	45	55	13	13	97	97	0.0
	Gun	146	157	124	161	35	59	305	377	-19.1
	Crossbow	105	107	125	120	28	45	258	272	-5.1
	Vertical Bow	53	85	118	124	25	29	196	238	-17.6
	Muzzleloader	30	16	49	37	16	11	95	64	48.4
	Youth	22	27	25	22	11	14	58	63	-7.9
	Total	395	421	486	519	128	171	1,009	1,111	-9.2

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Stark	Bonus Gun	63	62	98	134	27	37	188	233	-19.3
	Gun	249	281	334	377	82	104	665	762	-12.7
	Crossbow	294	337	291	277	77	93	662	707	-6.4
	Vertical Bow	130	165	204	190	47	47	381	402	-5.2
	Muzzleloader	46	34	125	98	25	25	196	157	24.8
	Youth	44	36	33	32	12	17	89	85	4.7
	Total	826	915	1,085	1,108	270	323	2,181	2,346	-7.0
Summit	Bonus Gun	18	15	25	27	2	4	45	46	-2.2
	Gun	66	88	68	80	17	27	151	195	-22.6
	Crossbow	384	283	416	306	105	92	905	681	32.9
	Vertical Bow	131	138	169	192	23	32	323	362	-10.8
	Muzzleloader	12	8	33	28	8	6	53	42	26.2
	Youth	12	10	4	6	1	2	17	18	-5.6
	Total	623	542	715	639	156	163	1,494	1,344	11.2
Trumbull	Bonus Gun	83	88	129	188	40	58	252	334	-24.6
	Gun	403	418	587	660	180	250	1,170	1,328	-11.9
	Crossbow	375	405	473	359	175	146	1,023	910	12.4
	Vertical Bow	171	174	278	292	74	104	523	570	-8.2
	Muzzleloader	59	64	155	144	24	43	238	251	-5.2
	Youth	45	50	38	32	21	22	104	104	0.0
	Total	1,136	1,199	1,660	1,675	514	623	3,310	3,497	-5.3
Tuscarawas	Bonus Gun	156	196	321	461	76	101	553	758	-27.0
	Gun	956	1,203	1,773	2,307	469	562	3,198	4,072	-21.5
	Crossbow	542	554	581	524	123	130	1,246	1,208	3.1
	Vertical Bow	431	414	532	660	78	91	1,041	1,165	-10.6
	Muzzleloader	157	148	369	435	65	90	591	673	-12.2
	Youth	160	151	117	101	47	36	324	288	12.5
	Total	2,402	2,666	3,693	4,488	858	1,010	6,953	8,164	-14.8
Union	Bonus Gun	25	32	43	42	6	17	74	91	-18.7
	Gun	152	153	162	181	41	59	355	393	-9.7
	Crossbow	101	80	84	78	23	28	208	186	11.8
	Vertical Bow	93	77	100	85	18	31	211	193	9.3
	Muzzleloader	25	19	50	35	17	11	92	65	41.5
	Youth	37	24	15	9	4	6	56	39	43.6
	Total	433	385	454	430	109	152	996	967	3.0

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
VanWert	Bonus Gun	26	20	52	54	11	11	89	85	4.7
	Gun	70	138	99	184	25	38	194	360	-46.1
	Crossbow	57	55	64	77	15	34	136	166	-18.1
	Vertical Bow	38	30	60	76	13	20	111	126	-11.9
	Muzzleloader	26	15	52	20	13	4	91	39	133.3
	Youth	14	27	9	25	2	7	25	59	-57.6
	Total	231	285	336	436	79	114	646	835	-22.6
Vinton	Bonus Gun	70	55	137	145	26	25	233	225	3.6
	Gun	573	564	838	830	167	197	1,578	1,591	-0.8
	Crossbow	207	214	191	142	43	37	441	393	12.2
	Vertical Bow	260	286	207	178	39	37	506	501	1.0
	Muzzleloader	101	74	176	140	34	22	311	236	31.8
	Youth	69	54	25	34	14	14	108	102	5.9
	Total	1,280	1,247	1,574	1,469	323	332	3,177	3,048	4.2
Warren	Bonus Gun	46	41	53	81	14	19	113	141	-19.9
	Gun	155	179	209	217	49	58	413	454	-9.0
	Crossbow	218	217	196	203	62	73	476	493	-3.4
	Vertical Bow	183	170	212	228	50	76	445	474	-6.1
	Muzzleloader	44	30	88	55	12	7	144	92	56.5
	Youth	28	19	13	10	2	10	43	39	10.3
	Total	674	656	771	794	189	243	1,634	1,693	-3.5
Washington	Bonus Gun	102	116	202	272	29	51	333	439	-24.1
	Gun	782	824	1,192	1,416	253	325	2,227	2,565	-13.2
	Crossbow	297	248	198	190	55	33	550	471	16.8
	Vertical Bow	230	236	197	215	24	28	451	479	-5.8
	Muzzleloader	124	108	295	274	46	32	465	414	12.3
	Youth	110	114	56	75	31	37	197	226	-12.8
	Total	1,645	1,646	2,140	2,442	438	506	4,223	4,594	-8.1
Wayne	Bonus Gun	61	54	89	131	36	29	186	214	-13.1
	Gun	230	295	324	440	98	138	652	873	-25.3
	Crossbow	241	259	230	271	63	66	534	596	-10.4
	Vertical Bow	123	146	186	234	35	49	344	429	-19.8
	Muzzleloader	31	31	94	99	17	14	142	144	-1.4
	Youth	27	35	37	41	26	21	90	97	-7.2
	Total	713	820	960	1,216	275	317	1,948	2,353	-17.2

Table 3. Continued.

County	Season	Bucks		Does		Button bucks		Total Harvest		
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	Change
Williams	Bonus Gun	64	59	108	92	28	33	200	184	8.7
	Gun	288	400	397	472	105	138	790	1,010	-21.8
	Crossbow	145	134	184	179	54	59	383	372	3.0
	Vertical Bow	158	152	267	324	62	63	487	539	-9.6
	Muzzleloader	48	38	95	79	25	18	168	135	24.4
	Youth	33	37	24	24	14	15	71	76	-6.6
	Total	736	820	1,075	1,170	288	326	2,099	2,316	-9.4
Wood	Bonus Gun	40	26	30	38	6	8	76	72	5.6
	Gun	103	144	85	132	21	33	209	309	-32.4
	Crossbow	90	96	71	95	25	38	186	229	-18.8
	Vertical Bow	73	80	71	86	9	38	153	204	-25.0
	Muzzleloader	15	19	17	21	8	8	40	48	-16.7
	Youth	15	19	16	24	10	13	41	56	-26.8
	Total	336	384	290	396	79	138	705	918	-23.2
Wyandot	Bonus Gun	44	36	99	93	18	35	161	164	-1.8
	Gun	259	302	357	419	71	109	687	830	-17.2
	Crossbow	115	105	97	128	25	40	237	273	-13.2
	Vertical Bow	82	101	124	181	17	27	223	309	-27.8
	Muzzleloader	35	33	81	79	21	18	137	130	5.4
	Youth	45	38	27	33	23	16	95	87	9.2
	Total	580	615	785	933	175	245	1,540	1,793	-14.1

Table 4. Ohio deer permit sales 2007-08 to 2011-12.

Year	Permit			Total
	Youth	Either-sex	Antlerless-only	
2007-08	65,647	411,522	101,197	578,366
2008-09	67,338	396,704	147,400	611,442
2009-10	67,828	394,620	162,460	624,908
2010-11	66,300	380,462	162,655	609,417
2011-12	62,864	377,302	163,383	603,549

Table 5. Number of deer damage complaints, permits issued, and deer killed, 2007-2011.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
ADAMS	COMPLAINTS	24	29	19	12	12
	PERMITS	24	29	18	12	12
	DEER KILLED	136	27	111	31	58
ALLEN	COMPLAINTS	1	6	7	4	7
	PERMITS	1	4	7	4	7
	DEER KILLED	4	7	26	8	12
ASHLAND	COMPLAINTS	38	35	38	32	26
	PERMITS	37	35	38	32	26
	DEER KILLED	207	230	326	216	217
ASHTABULA	COMPLAINTS	28	25	25	23	12
	PERMITS	28	25	25	22	12
	DEER KILLED	80	99	63	15	26
ATHENS	COMPLAINTS	16	30	24	19	14
	PERMITS	16	29	24	19	14
	DEER KILLED	72	105	160	108	45
AUGLAIZE	COMPLAINTS	0	0	2	4	3
	PERMITS	0	0	2	4	3
	DEER KILLED	0	0	1	3	2
BELMONT	COMPLAINTS	34	26	32	22	13
	PERMITS	33	26	32	22	11
	DEER KILLED	121	94	165	96	79
BROWN	COMPLAINTS	47	38	32	29	21
	PERMITS	39	33	28	26	20
	DEER KILLED	144	107	107	69	98
BUTLER	COMPLAINTS	22	29	25	16	21
	PERMITS	22	28	25	15	21
	DEER KILLED	58	55	57	36	39
CARROLL	COMPLAINTS	29	36	54	24	27
	PERMITS	29	35	53	24	26
	DEER KILLED	203	305	469	212	187
CHAMPAIGN	COMPLAINTS	2	3	3	1	2
	PERMITS	0	2	1	1	2
	DEER KILLED	0	4	1	7	3
CLARK	COMPLAINTS	3	6	2	5	2
	PERMITS	3	6	2	5	2
	DEER KILLED	23	32	18	23	8

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
CLERMONT	COMPLAINTS	25	33	30	30	23
	PERMITS	25	33	30	30	23
	DEER KILLED	178	137	124	90	99
CLINTON	COMPLAINTS	5	5	2	4	9
	PERMITS	5	5	2	4	9
	DEER KILLED	7	11	3	4	17
COLUMBIANA	COMPLAINTS	17	28	31	36	33
	PERMITS	17	28	31	36	33
	DEER KILLED	71	81	191	186	137
COSHOCTON	COMPLAINTS	48	45	41	35	26
	PERMITS	48	45	41	35	26
	DEER KILLED	625	517	624	283	319
CRAWFORD	COMPLAINTS	5	2	8	8	9
	PERMITS	3	1	8	5	7
	DEER KILLED	0	0	26	11	6
CUYAHOGA	COMPLAINTS	14	21	23	17	18
	PERMITS	14	20	21	17	16
	DEER KILLED	24	46	26	18	19
DARKE	COMPLAINTS	0	1	1	2	3
	PERMITS	0	1	1	1	1
	DEER KILLED	0	5	4	0	5
DEFIANCE	COMPLAINTS	2	10	18	12	12
	PERMITS	2	6	18	12	12
	DEER KILLED	6	15	25	2	2
DELAWARE	COMPLAINTS	31	24	24	23	18
	PERMITS	26	22	20	21	16
	DEER KILLED	47	43	21	16	15
ERIE	COMPLAINTS	10	18	22	24	26
	PERMITS	10	16	18	24	25
	DEER KILLED	13	36	47	70	70
FAIRFIELD	COMPLAINTS	58	36	36	36	52
	PERMITS	55	35	36	36	50
	DEER KILLED	199	184	193	132	187
FAYETTE	COMPLAINTS	0	0	1	0	0
	PERMITS	0	0	1	0	0
	DEER KILLED	0	0	3	0	0

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
FRANKLIN	COMPLAINTS	19	23	24	18	23
	PERMITS	19	22	24	18	23
	DEER KILLED	78	89	72	41	52
FULTON	COMPLAINTS	0	1	7	1	1
	PERMITS	0	1	7	1	0
	DEER KILLED	0	2	8	4	0
GALLIA	COMPLAINTS	9	5	4	7	3
	PERMITS	7	4	4	7	3
	DEER KILLED	6	16	12	26	15
GEAUGA	COMPLAINTS	20	19	23	19	14
	PERMITS	20	18	19	19	14
	DEER KILLED	62	33	57	45	56
GREENE	COMPLAINTS	14	14	20	20	23
	PERMITS	14	14	20	20	22
	DEER KILLED	41	47	65	46	41
GUERNSEY	COMPLAINTS	57	53	61	49	25
	PERMITS	55	53	61	48	24
	DEER KILLED	196	241	317	210	111
HAMILTON	COMPLAINTS	30	40	26	19	15
	PERMITS	30	40	26	19	15
	DEER KILLED	689	159	471	234	263
HANCOCK	COMPLAINTS	6	9	16	18	14
	PERMITS	4	8	15	16	12
	DEER KILLED	12	28	34	31	12
HARDIN	COMPLAINTS	3	1	6	8	11
	PERMITS	1	1	5	4	7
	DEER KILLED	4	5	7	9	14
HARRISON	COMPLAINTS	18	33	44	22	16
	PERMITS	18	32	39	22	16
	DEER KILLED	127	227	176	117	122
HENRY	COMPLAINTS	3	3	6	3	1
	PERMITS	1	2	5	0	1
	DEER KILLED	1	0	8	0	1
HIGHLAND	COMPLAINTS	31	36	44	31	20
	PERMITS	31	36	44	31	19
	DEER KILLED	175	195	222	95	111

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
HOCKING	COMPLAINTS	44	38	40	36	17
	PERMITS	43	38	40	35	17
	DEER KILLED	466	315	243	108	94
HOLMES	COMPLAINTS	25	19	30	17	15
	PERMITS	23	19	30	17	15
	DEER KILLED	155	113	148	100	75
HURON	COMPLAINTS	3	2	10	7	10
	PERMITS	3	1	10	6	8
	DEER KILLED	1	1	13	11	10
JACKSON	COMPLAINTS	21	17	22	17	12
	PERMITS	20	17	22	17	11
	DEER KILLED	30	46	42	36	46
JEFFERSON	COMPLAINTS	25	30	28	21	16
	PERMITS	25	29	26	21	16
	DEER KILLED	139	260	334	175	122
KNOX	COMPLAINTS	141	157	157	100	184
	PERMITS	141	151	154	97	184
	DEER KILLED	1038	1002	1169	619	580
LAKE	COMPLAINTS	27	21	22	20	26
	PERMITS	27	21	22	19	25
	DEER KILLED	81	94	160	69	121
LAWRENCE	COMPLAINTS	26	22	24	19	19
	PERMITS	26	22	24	19	18
	DEER KILLED	100	20	101	101	88
LICKING	COMPLAINTS	75	91	91	68	33
	PERMITS	75	91	91	67	32
	DEER KILLED	438	244	699	381	227
LOGAN	COMPLAINTS	17	33	27	24	29
	PERMITS	17	31	27	23	28
	DEER KILLED	85	77	118	99	110
LORAIN	COMPLAINTS	20	30	43	31	27
	PERMITS	20	29	41	30	27
	DEER KILLED	45	79	112	116	96
LUCAS	COMPLAINTS	6	8	13	6	7
	PERMITS	2	5	10	6	6
	DEER KILLED	8	22	23	4	25

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
MADISON	COMPLAINTS	1	0	1	1	0
	PERMITS	1	0	1	0	0
	DEER KILLED	5	0	0	0	0
MAHONING	COMPLAINTS	7	6	11	8	10
	PERMITS	5	4	11	7	9
	DEER KILLED	15	15	16	14	21
MARION	COMPLAINTS	1	5	0	0	1
	PERMITS	1	5	0	0	1
	DEER KILLED	2	7	0	0	2
MEDINA	COMPLAINTS	12	9	10	12	13
	PERMITS	8	4	9	12	12
	DEER KILLED	33	21	31	29	40
MEIGS	COMPLAINTS	20	12	13	10	11
	PERMITS	15	11	13	9	10
	DEER KILLED	67	36	68	26	17
MERCER	COMPLAINTS	0	1	1	0	0
	PERMITS	0	1	1	0	0
	DEER KILLED	0	0	2	0	0
MIAMI	COMPLAINTS	2	7	3	3	6
	PERMITS	1	5	3	3	2
	DEER KILLED	0	1	3	2	0
MONROE	COMPLAINTS	50	26	42	25	21
	PERMITS	48	26	42	25	21
	DEER KILLED	70	77	163	57	73
MONTGOMERY	COMPLAINTS	3	3	1	1	2
	PERMITS	3	2	1	1	2
	DEER KILLED	54	0	148	3	8
MORGAN	COMPLAINTS	28	27	29	22	14
	PERMITS	26	26	29	22	14
	DEER KILLED	236	178	151	100	97
MORROW	COMPLAINTS	5	3	8	6	7
	PERMITS	5	3	6	5	6
	DEER KILLED	7	5	15	3	4
MUSKINGUM	COMPLAINTS	67	57	76	50	46
	PERMITS	65	50	76	42	42
	DEER KILLED	378	297	396	207	235

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
NOBLE	COMPLAINTS	18	22	13	19	9
	PERMITS	18	21	13	17	7
	DEER KILLED	91	74	54	60	36
OTTAWA	COMPLAINTS	3	5	5	6	3
	PERMITS	1	5	5	6	3
	DEER KILLED	3	3	6	7	3
PAULDING	COMPLAINTS	5	5	4	5	4
	PERMITS	4	5	4	5	4
	DEER KILLED	7	5	6	4	8
PERRY	COMPLAINTS	18	15	14	7	8
	PERMITS	18	14	14	7	7
	DEER KILLED	44	30	35	9	16
PICKAWAY	COMPLAINTS	5	22	16	12	11
	PERMITS	5	20	16	12	11
	DEER KILLED	5	47	36	18	17
PIKE	COMPLAINTS	10	7	5	1	6
	PERMITS	9	7	5	1	6
	DEER KILLED	10	16	14	3	4
PORTAGE	COMPLAINTS	18	15	23	18	11
	PERMITS	18	15	23	18	11
	DEER KILLED	95	70	52	44	35
PREBLE	COMPLAINTS	4	3	6	3	0
	PERMITS	4	3	6	3	0
	DEER KILLED	27	5	37	19	0
PUTNAM	COMPLAINTS	0	2	6	2	6
	PERMITS	0	2	6	2	6
	DEER KILLED	0	8	15	12	16
RICHLAND	COMPLAINTS	31	28	33	19	31
	PERMITS	24	26	28	14	29
	DEER KILLED	132	122	151	42	168
ROSS	COMPLAINTS	25	23	22	20	18
	PERMITS	24	22	22	20	18
	DEER KILLED	183	152	135	169	155
SANDUSKY	COMPLAINTS	5	13	8	7	6
	PERMITS	3	12	7	5	6
	DEER KILLED	6	4	57	8	20

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
SCIOTO	COMPLAINTS	22	18	15	17	8
	PERMITS	21	17	15	16	8
	DEER KILLED	144	125	174	122	103
SENECA	COMPLAINTS	7	13	11	12	8
	PERMITS	5	12	10	11	7
	DEER KILLED	11	34	24	14	6
SHELBY	COMPLAINTS	0	0	0	0	2
	PERMITS	0	0	0	0	2
	DEER KILLED	0	0	0	0	3
STARK	COMPLAINTS	13	13	26	17	19
	PERMITS	12	12	22	17	18
	DEER KILLED	24	33	53	15	48
SUMMIT	COMPLAINTS	20	25	27	19	18
	PERMITS	17	22	25	15	17
	DEER KILLED	71	80	116	50	84
TRUMBULL	COMPLAINTS	14	17	23	17	19
	PERMITS	14	14	23	17	19
	DEER KILLED	37	39	74	52	33
TUSCARAWAS	COMPLAINTS	49	32	56	18	17
	PERMITS	48	32	56	18	17
	DEER KILLED	389	365	511	131	116
UNION	COMPLAINTS	4	3	2	3	5
	PERMITS	4	3	2	3	5
	DEER KILLED	13	17	4	4	8
VANWERT	COMPLAINTS	2	6	11	7	6
	PERMITS	1	6	11	6	6
	DEER KILLED	0	7	16	3	11
VINTON	COMPLAINTS	5	5	8	7	3
	PERMITS	5	5	8	7	3
	DEER KILLED	27	5	18	11	2
WARREN	COMPLAINTS	15	12	9	10	8
	PERMITS	15	12	9	10	7
	DEER KILLED	58	41	36	31	17
WASHINGTON	COMPLAINTS	56	33	39	35	36
	PERMITS	54	33	39	35	34
	DEER KILLED	185	112	140	108	106

Table 5. Continued.

COUNTY	DATA	YEAR				
		2007	2008	2009	2010	2011
WAYNE	COMPLAINTS	19	23	41	26	28
	PERMITS	18	22	37	26	28
	DEER KILLED	70	106	217	105	92
WILLIAMS	COMPLAINTS	9	17	38	18	22
	PERMITS	8	17	38	18	22
	DEER KILLED	26	74	114	57	60
WOOD	COMPLAINTS	1	2	3	2	4
	PERMITS	1	0	3	2	3
	DEER KILLED	3	0	0	2	4
WYANDOT	COMPLAINTS	4	6	6	5	5
	PERMITS	3	5	6	5	5
	DEER KILLED	0	19	34	24	31
TOTAL COMPLAINTS		1677	1732	1953	1469	1402
TOTAL PERMITS		1591	1650	1893	1411	1345
TOTAL DEER KILLED		8723	7685	10524	5878	5741



SOUTH DAKOTA 2012 DEER REPORT

MIDWEST DEER AND WILD TURKEY STUDY GROUP *Custer State Park, SD*

OVERVIEW

East River

Deer populations have decreased throughout the eastern half of the east river deer management area, with most units in this area below herd management objectives. In the remaining management area, populations appear to be stable and in some management units increasing. White-tailed deer are the predominant deer species east



of the river, with 97% of the firearm season harvest in this management area being whitetails. The winters of 2009-10 and 2010-11 were severe in eastern South Dakota, especially along the northern portions, presumably causing substantial over-winter mortality and reduced recruitment rates. The 2011 preseason fall herd composition surveys indicated recruitment rates in this management area were at historical lows; 91 fawns:100 does, down 13% from 2010. Hunter harvest rates in 2011 throughout a lot of the area were down considerably from the record harvest of 2010. As a result, antlerless tags were significantly reduced for the 2012 season and firearm tags were reduced by 22 percent.

The mild winter of 2011-2012 and lack of snow cover will most likely have a positive impact on both white-tailed and mule deer populations east of the river. With essentially unlimited forage resources throughout most of the east river deer management area, due to agricultural row crops, deer should be in great body condition and we expect recruitment rates to be above last year. Approximately 80% of the area has experienced moderate to extreme drought conditions this summer, therefore, forage availability and/or quality may be less abundant than last year in some areas which may affect deer nutrition to an unknown extent. Reports of Epizootic Hemorrhagic Disease (EHD) occurred at record levels in 2011 and are also numerous this year in some units. Although the impacts from EHD should be restricted to local herds, reports are still coming in and the complete effects of this years' disease outbreak remain unknown. With the reduction of antlerless tags going into the 2012 seasons, we still expect deer populations to rebound and provide ample hunting opportunities in the near future.

West River

Deer populations have begun to decrease over the past few years throughout most of the west river deer management area. Both deer species are abundant in this area, but white-tailed deer harvest makes up 74% of the total firearm season harvest. Mule deer populations continue to decline in most units across the west river deer management area. The winters of 2008-09, 2009-10, and 2010-11 have had negative impacts on mule deer populations and conservative harvest strategies have been implemented the last few years. Mule deer recruitment rates in 2011 were 67 fawns:100 does, down 14% from 2010. White-tailed deer populations in this area appear to be stable in most units but decreasing in others. The far northwestern portion of the state likely experienced above average winter loss in 2010-11 and antlerless harvest has been reduced accordingly. White-tailed deer recruitment rates in 2011 were 90 fawns: 100 does, down 7% from 2010. Total deer tag numbers for the west river deer management area in 2012 were reduced 20% from 2011.

The mild winter of 2011-2012 and lack of snow cover will likely have a positive impact on deer populations west of the river. Approximately 100% of the area has experienced moderate to extreme drought conditions this

summer, therefore, forage availability and/or quality may be less abundant than last year in some areas which may affect deer nutrition to an unknown extent. Reports of EHD occurred at record levels in 2011 and are also numerous this year in some units. Although the impacts from EHD should be restricted to local herds, reports are still coming in and the complete effects of this year's disease outbreak remain unknown. With the reduction of antlerless tags going into the 2012 seasons, we still expect deer populations to rebound and provide ample hunting opportunities in the near future.

Black Hills

The Black Hills deer population continues to remain at densities lower than the mid-2000s. White-tailed deer are the predominant species, with 95% of the firearm season harvest in the Black Hills being whitetails. Mule deer populations appear to be stable, but whitetail populations have declined in recent years. Recruitment of white-tailed deer remains lower than the prairie units, with 64 fawns per 100 does counted in 2011. Several mortality factors have contributed to the lower deer densities and these potentially include hunter harvest, predation, disease, severe winters, and vehicle collisions. Conservative antlerless harvest will continue throughout the hills region. Total firearm deer tag numbers for the Black Hills Deer Management area were reduced 18% in 2012, and youth, muzzleloader, and archery deer statewide deer seasons are now restricted to one license in this management area.

The mild winter of 2011-2012 and lack of snow cover should have a positive impact on deer populations in the Black Hills. The entire Black Hills has experienced extreme drought conditions this summer, which could potentially impact forage availability, especially in the southern areas. With the reductions in firearms antlerless tags in the 2012 season, further restrictions on antlerless harvest from the statewide deer seasons (youth, muzzleloader, archery), and increase lion harvest quotas, we expect deer populations to rebound in the near future.

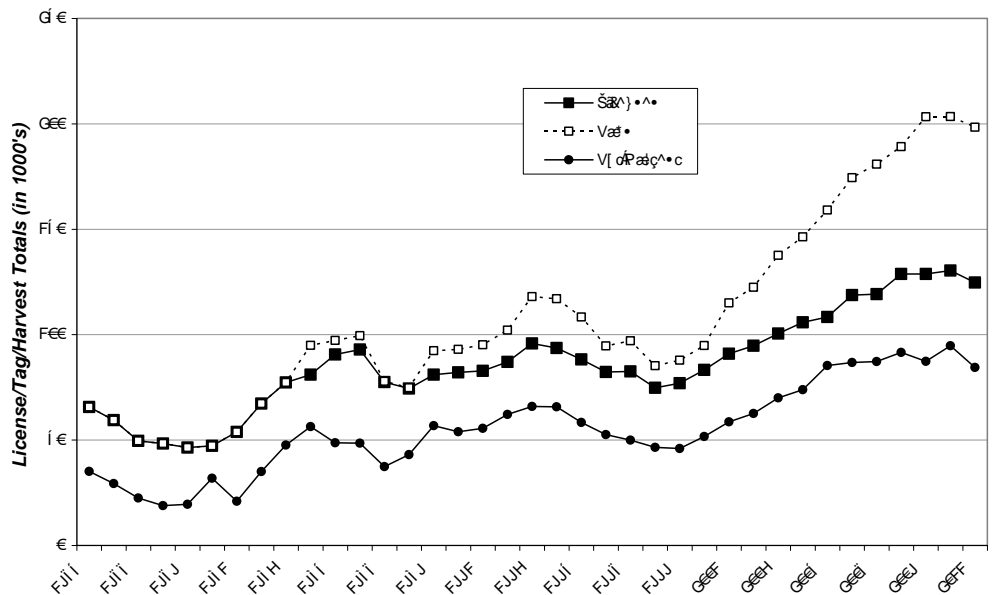
DEER HARVEST

Statewide

There were 73,722 resident deer licenses (plus unlimited licenses) available in 2011 and 116,049 were issued. Nonresidents had 2,884 licenses (plus unlimited licenses) available and 10,679 were issued. Statewide, there were a total of 126,728 licenses sold that represented a total of 200,406 tags, a decrease in 3,624 licenses and 2,969 tags from 2010. This was the third year that triple-tag licenses were issued for both East and West River seasons. Random samplings were taken for each unit within each season unless the numbers of hunters were low enough that all were sampled to satisfy the statistical analyses. In most cases, the response rates in the majority of units within seasons did not meet the 85% goals.

The projected statewide deer harvest was 85,160, a 10% decrease from 2010. This projection included 33,285 whitetail bucks, 40,772 whitetail does, 5,675 mule bucks and 5,428 mule does. A decrease in overall harvest of over 9,500 deer with a moderate decrease in the number of tags issued accounted for the 4% decrease in harvest success from 2010. Reductions in harvest for East River Deer,

South Dakota Combined Deer Licensing 1975-2011



Archery Deer, Muzzleloader Deer, and West River Deer accounted for most of the decrease, however, every season showed a decrease from 2010. Both whitetail buck and doe harvest estimates decreased from 2010 by 3,092 and 3,296 respectively. Mule buck and doe harvest decreased from 2010 by 1,318 and 1,859 respectively. Mule deer made up approximately 13% of the total harvest.

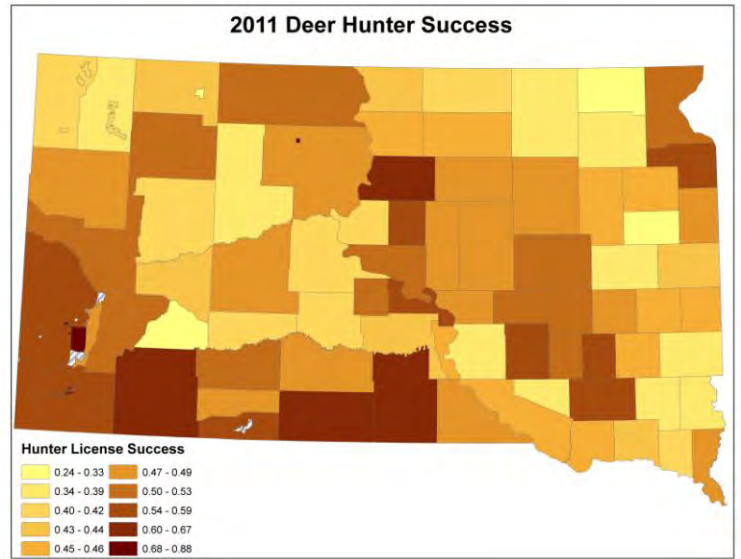
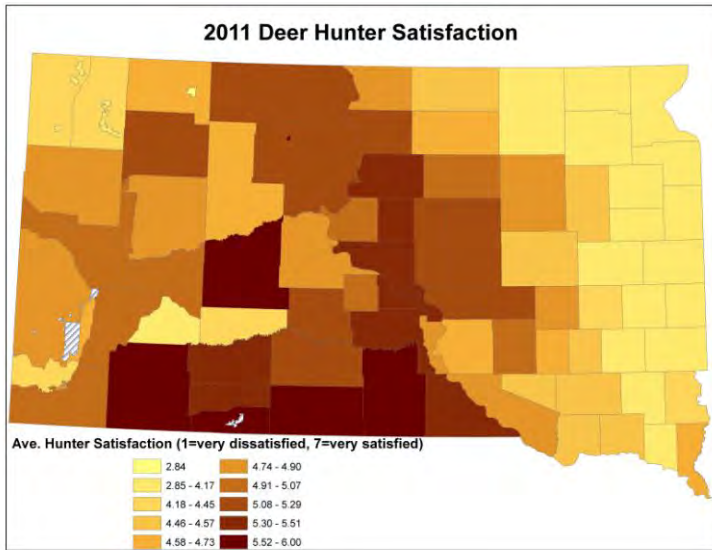
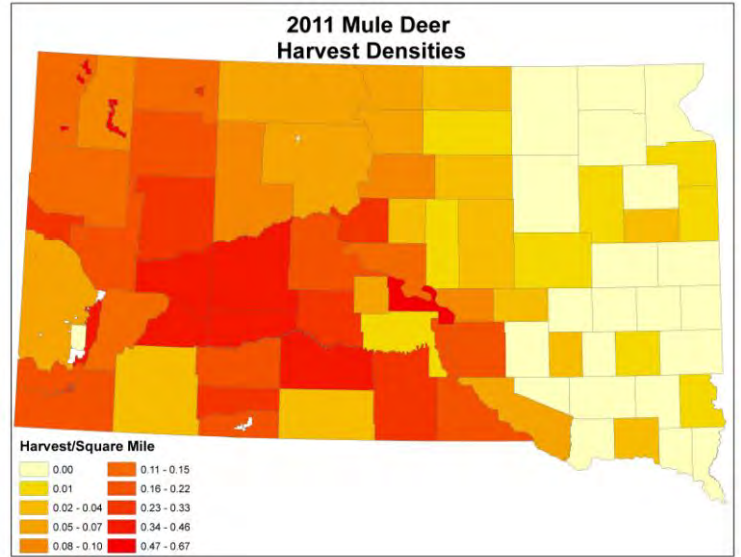
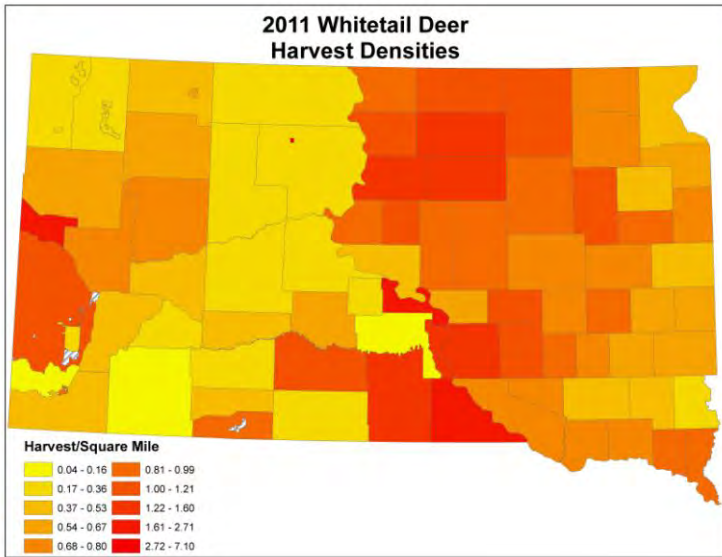
The 2011 overall statewide harvest success decreased significantly to 42.5% from 46.6% in 2010. Harvest success ranged from 18% at Sand Lake Refuge to 74% for Custer State Park.

Respondents reported hunting an average of 5.16 days per hunter, which projects to a statewide total of 660,140 recreation days in 2011. The average number of days hunted was slightly higher than in 2010. That combined with the moderate decrease in license sales resulted in an increase of approximately 22,278 total days of recreation from 2010. Average hunter satisfaction values (1=very dissatisfied to 7=very satisfied) varied between seasons and ranged from 2.41 for Waubay Refuge and 2.93 at Lacreek Refuge to 5.60 for West River Special Buck and 5.70 for Mentored Youth.

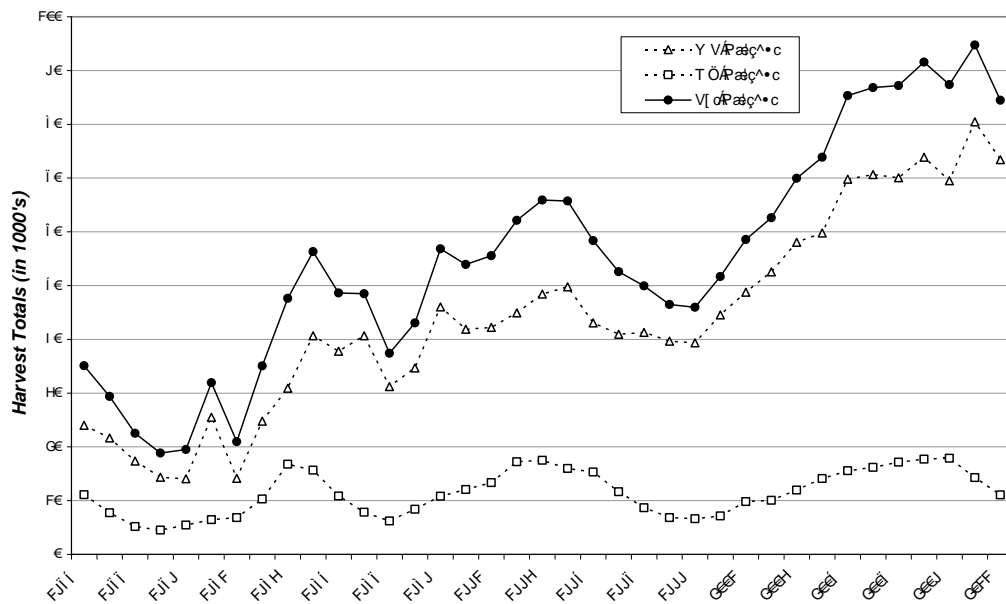
2011 Statewide Deer Harvest Projection Summary

last revised: 13 June 2012

SOUTH DAKOTA Harvest Statistic	Season	Archery	Youth Antlerless	Mentored Youth	Muzzleloader	Landowner Own Land Antlerless	West River	West River Landowner Own Land	West River Special Buck Unit	East River	East River Landowner Own Land	East River Special Buck Unit	Refuges			Black Hills	Custer State Park	Grand Totals
													Sand Lake NWR	Lacreek NWR	Waubay NWR			
Licenses/Tags																		
Resident Licenses																		
Sold		Wja anà	Wja anà	Wja anà	Wja anà	Wja anà	G EG	Wja anà	í EE	I HÉ	Wja anà	í EE	GEE	I E	í E	I EE	í	í HÉ GG
		G EÉ F	í EG	G EÉ H	I EÉ I	G EÉ	G EÉ I	F B HG	I JI	H EÉ G	I EÉ I	í EE	F J J	I F	í H	I EÉ H	í	F F I E J
Resident Tags																		
Sold		Wja anà	Wja anà	Wja anà	Wja anà	Wja anà	í EE I	Wja anà	í EE	í B I	Wja anà	í EE	I EE	í E	í E	I EE	í	F H EÉ I
		G EÉ F	í EG	G EÉ H	I EÉ G	G EÉ	I H EÉ I	H EÉ G	I JI	í B I	I EÉ F H	í EE	H I	í G	í H	I EÉ H	í	F I EÉ I F
Nonresident Licenses																		
Sold		Wja anà	Wja anà	ÞEE	Wja anà	ÞEE	G EG	ÞEE	í EE	Š 4 G	ÞEE	ÞEE	G E	í	í	H G	ÞEE	G E I I
		H EÉ I	í I I	ÞEE	G I	ÞEE	H EÉ J	ÞEE	I J J	F B I	ÞEE	ÞEE	G F	I	F	H G J	ÞEE	F EÉ I J
Nonresident Tags																		
Sold		Wja anà	Wja anà	ÞEE	Wja anà	ÞEE	I EÉ G J	ÞEE	í EE	Š 4 G	ÞEE	ÞEE	I E	í	í	H G	ÞEE	í EÉ F F
		H EÉ I E	í I I	ÞEE	í I I	ÞEE	I EÉ I	ÞEE	I J J	I EÉ F	ÞEE	ÞEE	I G	I	F	H G J	ÞEE	F I EÉ I
Total Licenses																		
Sold		Wja anà	Wja anà	Wja anà	Wja anà	Wja anà	G EG I	Wja anà	F EEE	I H EÉ	Wja anà	í EE	G E	í	í	I EÉ G	í	í I EÉ E
		G EÉ I	í EG H	G EÉ H	I EÉ G	G EÉ	G EÉ I	F B HG	J J I	I EÉ G	I EÉ I	í EE	G E	í	í	I EÉ I	í	F G EÉ G
Total Tags																		
Sold		Wja anà	Wja anà	Wja anà	Wja anà	Wja anà	í G EÉ I	Wja anà	F EEE	í B I	Wja anà	í EE	I I E	í	í	I EÉ G	í	F I H EÉ I
		H EÉ E F	í EG H	G EÉ H	í EÉ E	G EÉ	í F EÉ G	H EÉ G	J J I	í EÉ I E	I EÉ F H	í EE	I I E	í	í	I EÉ I	í	G EÉ E E
Recreation																		
<p>Qc\as^Aas^P) eá</p> <p>V(cas^P) eá</p> <p>T^as^Aas^P) eá</p>																		
		F G E F	í EÉ I	I EÉ I	I EÉ G	H EÉ E	H EÉ I	I EÉ E	H EÉ I	I EÉ H	I EÉ I	í EÉ I	H EÉ E	í EÉ E	H EÉ G	I EÉ I	G EÉ E	í EÉ F
		G H EÉ I	G EÉ E	í EÉ I	G EÉ F E	í EÉ I	J G EÉ I	í EÉ G	H EÉ I F	F J I EÉ J I	G EÉ E G	G EÉ G	í G	G G J	G I	G EÉ U I	F G G	í I EÉ I E
Harvest																		
White-tailed Deer																		
Ó & •		I EÉ I	H H J	F I H	H EÉ	J F	F EÉ H	í J H	H EÉ	F G E G F	G EÉ F E	G H J	H EÉ	F I	J	G EÉ F G	F E	H EÉ I
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Total		í EÉ J	G EÉ I	F EÉ F	F EÉ G F	í EÉ	G G EÉ I	F EÉ J	H I	H EÉ I	H EÉ E	G I	í F	G	F I	G EÉ F H	H I	í I EÉ I
Mule Deer																		
Ó & •		í I J	I H	F I	í H	J	H EÉ I	H I	I F I	H I	í I	H H	E	E	E	F EÉ	G	í EÉ I
Ó \ •		F J H	H G G	F I E	G I	F E	H EÉ I	F I	F	í F	I F	F	E	E	E	F E	E	í EÉ G
Total		í I F	H I	F I	G J	F F H	í EÉ G	í F I	I F I	í I I	F G	H	E	E	E	F F I	G	F F EÉ E
Total Deer Harvest																		
Ó & •		I EÉ I	H G	F I	H J F	F EÉ	F H EÉ G F	F EÉ F	í G	F H EÉ	G EÉ J I	G G	H EÉ	F I	J	G EÉ F J	F G	H I B I E
Ó \ •		H EÉ G	G EÉ F	F EÉ H	F EÉ G J	í F H	F I EÉ I	í F G	í	F I EÉ E	F EÉ J E	F I	í F	J	í	I F F	G H	í I EÉ E
Total		8,401	3,053	1,200	1,720	913	29,505	1,563	731	31,712	3,385	289	81	25	16	2,530	35	85,160
Success																		
		G A	I H A	I F A	G G A	I I A	I I A	I E A	I H A	I I A	H A	I I A	F I A	I I A	G A	I I A	I I A	I G A



South Dakota's Combined Deer Harvest 1975-2011



West River Firearm Deer

There were 29,895 licenses issued for the 2011 West River Firearm Deer season (26,966 regular, 997 Special Buck and 1,932 Landowner Own Land Only) for a total of 65,736 tags.

The West River season was open 16 days from November 12-27 in most units and from November 5-27 in Corson, Dewey and Ziebach counties. Units 50A in Mellette County and 30A in Gregory County were open from Nov. 5-8 and 21-27, while units 50B and 30B were open from Nov. 12-27. The season was also open from December 31, 2011 - January 8, 2012 for all unfilled and unsold antlerless deer tags. Beginning December 31, all unused and unsold tags for "any deer" and "any whitetail" converted to their respective antlerless tags. All antlerless tags were also valid during the Firearm Antelope season (October 1-16) in their respective units.

2011 West River Deer harvest by date

	Nov 12-27	Nov 5-27	Dec 31-Jan 8	Total
Regular	26,966	1,932	997	29,895
Special Buck	997	1,932	26,966	29,895
Landowner Own Land Only	1,932	997	26,966	29,895

2011 West River Deer antlerless harvest by date

	Nov 12-27	Nov 5-27	Dec 31-Jan 8	Total
Regular	1,932	997	26,966	29,895
Special Buck	997	1,932	26,966	29,895
Landowner Own Land Only	1,932	997	26,966	29,895

A random sample of 11,970 hunters was taken from the regular West River season, 1,542 from the Landowner Own Land Only licenses, and 998 from the Special Buck licenses. The overall response rates for the seasons were 77% for the regular West River Deer, 68% for landowner West River Deer and 84% for Special Buck. Of all responding hunters, 65% of regular West River, 42% of landowner on own land and 70% of Special Buck hunters responded over the Internet.

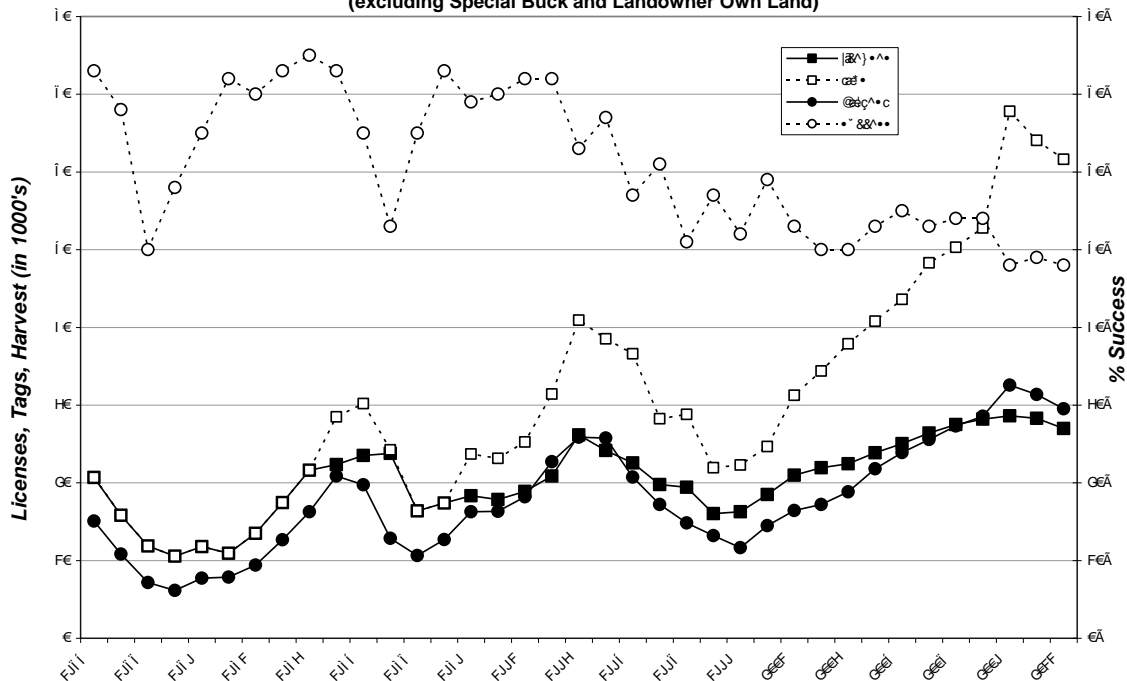
Respondents reported hunting an average of 3.64 days in the regular West River season, 4.00 days for landowner and 3.66 days in the Special Buck. These averages projected to a total of 103,564 recreation days for all West River deer seasons. Hunters reported harvesting approximately 4% of their deer during the Firearm Antelope season, 86% during the regular season, and 10% during December 31 - January 8.

The West River projected deer harvest was 29,505 for the regular season, 1,563 for landowner on own land, and 731 for the Special Buck licenses. Success rates were 48% for the regular season, 50% for landowner and 73% for Special Buck.

The mean satisfaction score for those responding to the regular West River season was 5.00 (1 being very dissatisfied and 7 very satisfied).

West River Deer Regular Season 1975-2011

(excluding Special Buck and Landowner Own Land)



East River Firearm Deer

There were 47,539 licenses issued for the 2011 East River Firearm Deer season (41,552 regular, 500 Special Buck and 5,487 Landowner Own Land Only) for a total of 79,973 tags.

The East River season was open 16 days from November 19 through December 4 in all units. The season was also open from December 31, 2011 - January 8, 2012 for all unfilled and unsold antlerless deer tags. Beginning December 31, all unused and unsold tags for "any deer" and "any whitetail" converted to their respective antlerless tags.

A random sample of 18,190 hunters was taken from the regular East River season, 4,164 from the Landowner Own Land Only licenses, and 499 Special Buck hunters. The response rates were 75% for the regular East River Deer, 70% for Landowner East River Deer and 86% for Special Buck. Of all responding hunters, 61% of regular East River, 52% of Landowner Own Land and 72% of Special Buck hunters responded over the Internet.

Respondents reported hunting an average of 4.73 days per hunter for the regular season, 4.68 days for Landowner Own Land and 5.46 days for Special Buck, resulting in a projected total of 224,928 recreation days for the entire East River season. Hunters reported harvesting approximately 87% of their deer during the regular season and 13% from December 31, 2011 - January 8, 2012.

The East River projected deer harvest was 31,712 for the regular season, 3,385 for Landowner Own Land, and 289 for the Special Buck season. Success rates were 45% for the regular season, 38% for Landowner Own Land, and 58% for Special Buck.

The mean satisfaction score for those responding to the regular East River survey was 4.51, for the Landowner Own Land survey was 4.71, and for the Special Buck survey was 4.99 (1 = "very dissatisfied" and 7 = "very satisfied").

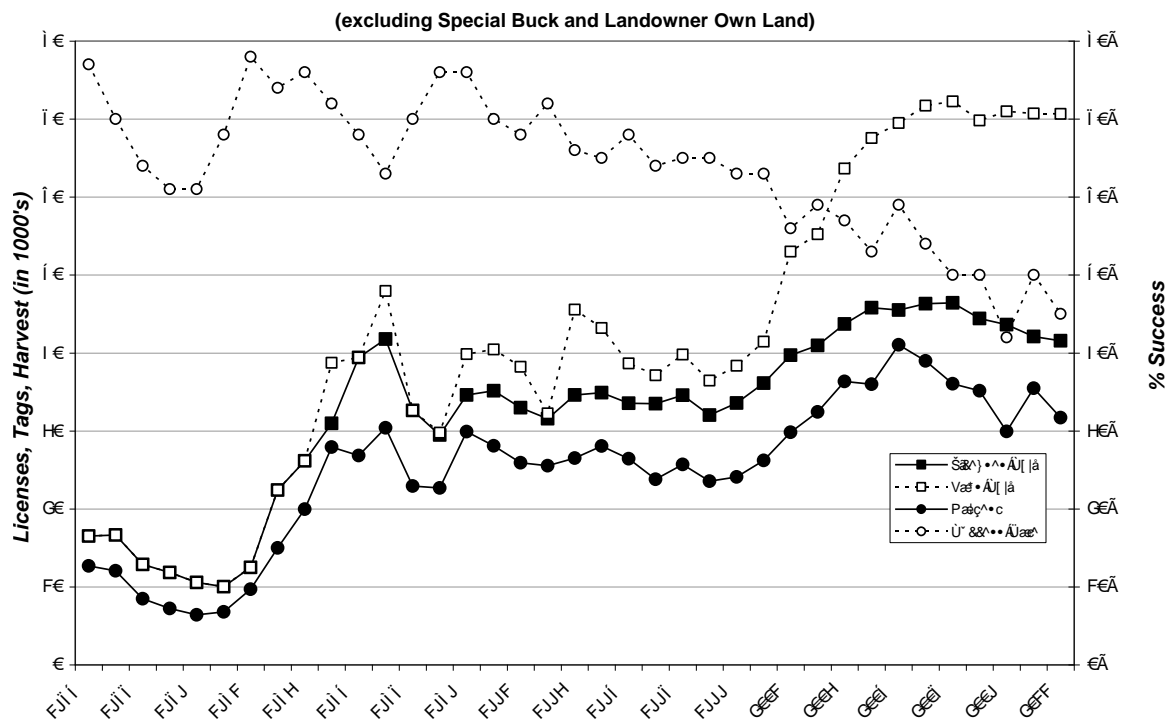
2011 East River Deer harvest by date

	Nov 19 - Dec 4	Dec 31 - Jan 8	Total
Regular	41,552	500	42,052
Special Buck	500	0	500
Landowner Own Land	5,487	0	5,487
Total	47,539	500	48,039

2011 East River Deer antlerless harvest by date

	Nov 19 - Dec 4	Dec 31 - Jan 8	Total
Regular	31,712	289	32,001
Landowner Own Land	3,385	0	3,385
Total	35,097	289	35,386

East River Deer Regular Season 1975-2011



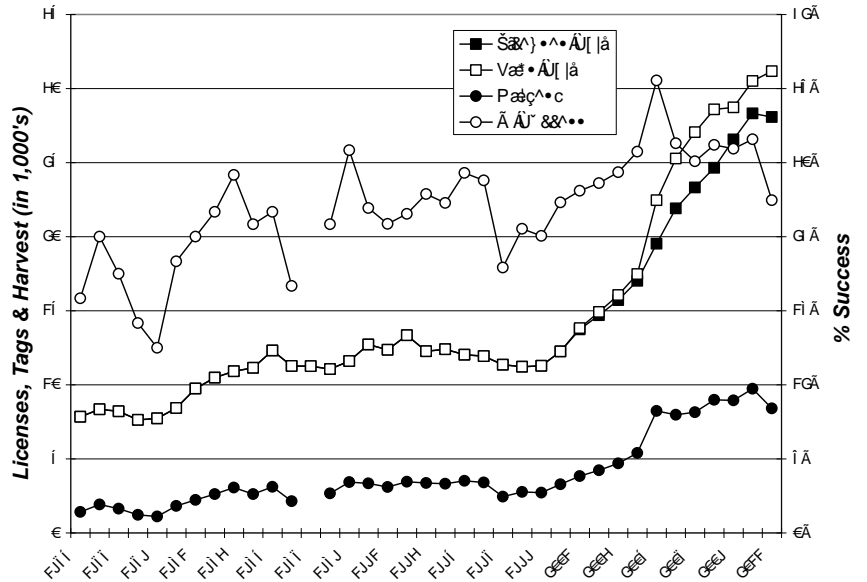
Archery Deer

There were 28,067 archery deer licenses issued in 2011 (24,681 resident, 3,386 nonresident). All were single any-deer tags, single antlerless-deer tags, or double antlerless-deer tags for the Statewide, LM1, East River or West River units. The 2011 Archery Deer season ran from September 24, 2011 through January 15, 2012. Licensed "any deer" hunters who did not fill their license by December 31 were allowed to continue hunting through January 15 for antlerless deer only.

Respondents reported hunting 12.51 days per hunter, which projects to a total of 239,366 recreation days for the season.

The projected deer harvest for the archery season was 8,401 deer (4,216 whitetail bucks, 3,534 whitetail does, 459 mule deer bucks, and 193 mule deer does). The success rate for the season was 27%. The five counties with the highest reported harvest were Pennington, Brown, Minnehaha, Meade, and Lawrence. Satisfaction was also measured (1=very dissatisfied to 7=very satisfied) and the average response for this season was 4.86.

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Muzzleloader Deer

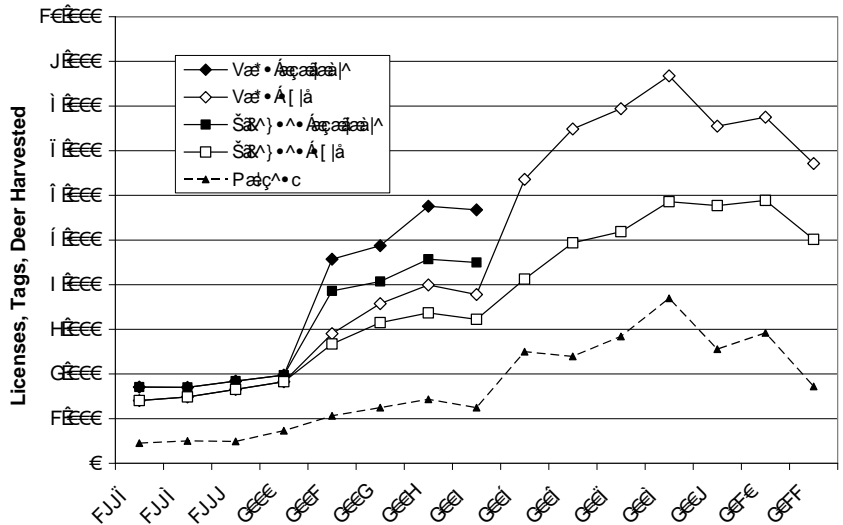
There were 5,012 antlerless deer licenses (4,747 resident, 265 nonresident) and 1,018 "any deer" licenses issued for the 2011 Muzzleloader Deer season, which represented a total of 6,712 tags. All 4,578 hunters were surveyed and 3,676 responded for a response rate of 81%. Approximately 70% of muzzleloader hunters used the Internet to respond.

The 2011 muzzleloader season was open from December 1, 2011 through January 15, 2012. From Jan. 1-15, all "any deer" tags converted to "antlerless deer" tags. This was the seventh year that "any deer" licenses were available for the muzzleloader season and 5,404 applications were received for those. The number of "any deer" licenses available was increased to 1,000 in 2008. Respondents averaged 4.48 days of hunting for a projected total of 23,610 recreation days for the season.

The estimated harvest for the muzzleloader season was 1,720 deer (308 whitetail bucks, 1,113 whitetail does, 83 mule deer bucks, and 216 mule deer does). The overall success rate for the muzzleloader season was 26% and average satisfaction was 4.36 (1 = very dissatisfied, 7 = very satisfied).

The five counties with the highest reported harvest were Pennington, Fall River, Charles Mix, Brookings, and Gregory. These five counties accounted for approximately 22% of the total statewide harvest.

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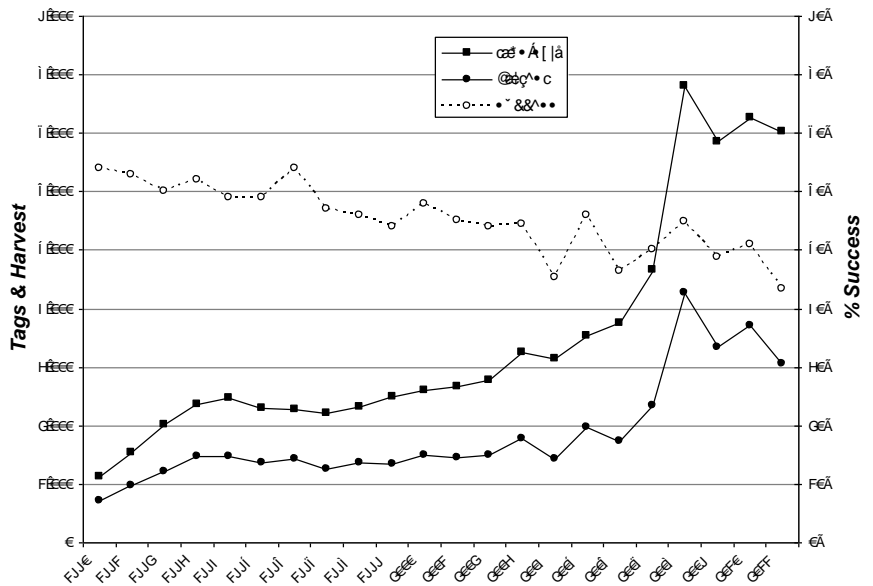
Youth Deer

There were 7,033 single-tag antlerless licenses issued for the 2011 Youth Deer hunting season (6,288 resident, 745 nonresident). Approximately 92% of hunters were sampled and 3,124 responses (69%) were received. Approximately 59% of responding hunters used the Internet to respond.

The youth season ran from September 10, 2011 through January 15, 2012. Respondents reported hunting an average of 5.58 days each, which projected to 27,632 recreation days for the season.

Projections for the season indicated that a total of 339 whitetail bucks, 2,349 whitetail does, 43 mule deer bucks, and 322 mule deer does were harvested. The total harvest for the Youth Deer season was 3,053, and the overall success rate was 43%. The average satisfaction rating for those responding (1 being very dissatisfied and 7 very satisfied) was 5.38.

Youth Deer 1990-2011



Mentored Youth Deer

There were 2,335 resident single-tag antlerless mentored youth deer licenses issued for 2011. All mentors/hunters were sampled and 1,646 responses (71%) were received. Approximately 72% of responding mentors/hunters used the Internet to respond.

The Mentored Youth licenses were valid during the Youth Deer season which ran from September 10, 2011 through January 15, 2012. Respondents reported hunting an average of 4.16 days each, which projected to 9,714 recreation days for the season.

Projections for the season indicated that a total of 143 whitetail bucks, 872 whitetail does, 14 mule deer bucks, and 171 mule deer does were harvested. The total harvest for the Mentored Youth Deer season was 1,200, and the overall success rate was 51%. The five counties with the highest reported harvest were Pennington, Gregory, Meade, Custer, and Lawrence.

The average satisfaction rating for those responding (1 being very dissatisfied and 7 very satisfied) was 5.70.

Landowner Free Antlerless Deer

There were 2,005 free single-tag antlerless licenses issued to qualifying resident landowners for the 2011 West River Deer, East River Deer, Archery Deer, Muzzleloader Deer, and Youth Deer hunting seasons. Approximately 46% of hunters were sampled and 542 responses (74%) were received. Approximately 54% of responding hunters used the Internet response site.

Free Landowner on Own Land Antlerless Deer licenses were valid for qualifying hunters from September 10, 2011 through January 15, 2012. Respondents reported hunting an average of 3.80 days each, which projected to 6,270 recreation days.

Projections for the season estimated that a total of 91 whitetail bucks, 709 whitetail does, 9 mule deer bucks, and 104 mule deer does were harvested. The total harvest for the Free Antlerless Landowner licenses was 913, and the overall success rate was 46%. The five counties with the highest reported harvest were Tripp, Meade, Gregory, Charles Mix, and Butte.

The average satisfaction rating for those responding (1 being very dissatisfied and 7 very satisfied) was 4.78.

National Wildlife Refuge Deer

There were a total of 329 licenses issued for the 2011 Wildlife Refuge Deer seasons, which included 220 at Sand Lake (199 residents and 21 nonresidents); 45 at Lacreek (41 residents and 4 nonresidents); and 64 at Waubay (63 residents and 1 nonresident).

All license-holders for each season were surveyed and response rates for Sand Lake, Lacreek, and Waubay refuges were 78%, 91%, and 77%, respectively. Approximately 73% of survey recipients responded through the Internet.

The seasons had different opening dates at each refuge. The average days hunted were 3.30 at Sand Lake, 5.10 at Lacreek and 3.82 at Waubay.

The reported harvest at the refuges consisted of only white-tailed deer. The projected harvest for Sand Lake was 30 bucks and 51 does, for Lacreek was 16 bucks and 9 does, and for Waubay was 9 bucks and 7 does. The projected success rate for Sand Lake was 18%, for Lacreek was 45%, and for Waubay was 25%.

Black Hills Deer

There were 4,466 single-tag licenses issued for the 2011 Black Hills Deer season (4,137 resident, 329 nonresident).

A random sample of 3,644 hunters was taken (82% of license holders) and there were 2,251 responses for a 62% return rate. All responses were received through Internet.

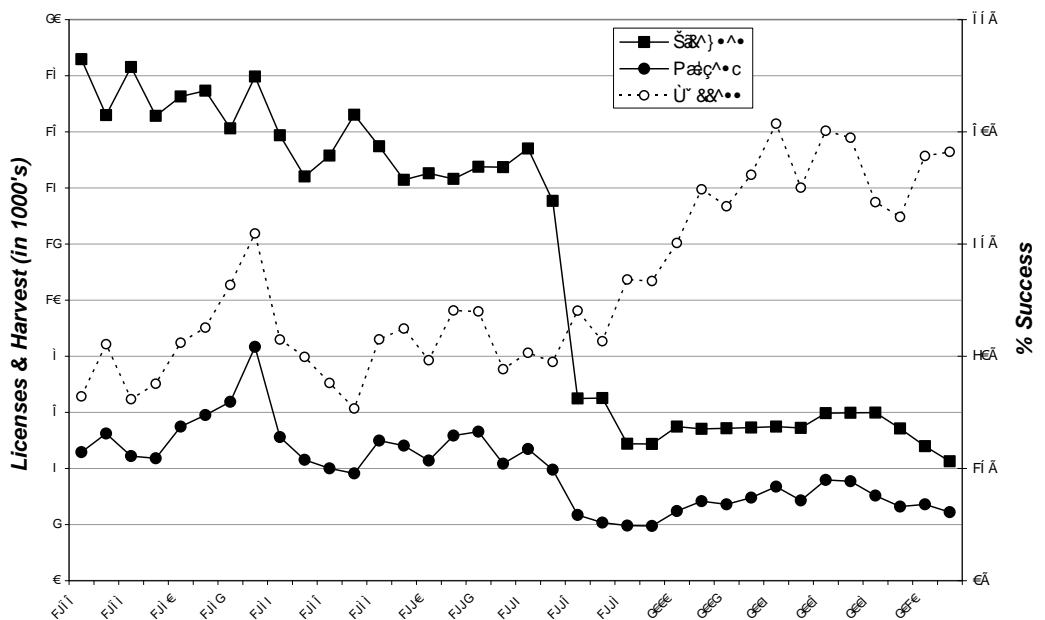
The season ran the month of November, a total of 30 days. The special antlerless season again ran the entire month of November, an increase from the 10-day season in 2004. Those responding reported hunting an average of 4.78 days, which projected to 21,348 recreation days for the season. Of those responding, 8% stated they did not hunt at all during the season.

The mean satisfaction score for all combined units was 4.89 on a scale ranging from 1 = "very dissatisfied" to 7 = "very satisfied".

The harvest projection for the Black Hills Deer season was 2,530 deer (1,948 adult whitetail bucks, 63 fawn whitetail bucks, 357 adult whitetail does, 44 fawn whitetail does, 105 adult mule deer bucks, 2 fawn mule deer bucks, 10 adult mule deer does and no fawn mule deer does). The overall season harvest success rate was 57%, the same as in 2010. Hunters reported seeing an average of 50 deer, including 9 bucks during their hunt.

Including the estimated Black Hills harvest of 1,245 deer from the Archery, Youth and Muzzleloader seasons, approximately 3,775 deer were harvested in the Black Hills proper.

Black Hills Buck/Any Deer 1976-2011



Custer State Park Deer

Forty-six of 47 hunters reported. For the white-tail doe season 6 of 34 reported hunters did not hunt; however, for the 28 hunters that hunted, 23 killed antlerless deer (82%). During the antlerless season, some hunters were not successful ($n = 5$, 18%). This year the antlerless doe season was a single tag. Overall, roughly half the number of antlerless deer were harvested compared with last year (44 antlerless deer in 2010). For the any deer seasons both mature mule deer and white-tailed bucks were killed.

Summary comparison of the 2001-2011 CSP seasons.

Year	Apps/Licenses	WT Harvest	MD Harvest	Success	Avg. Days Hunted
2001	606/4	2 bucks	2 bucks	100%	5.0
2002	651/6	4 bucks	2 bucks	100%	5.67
2003	708/42	11 bucks, 18 does	1 buck	100%	2.1
2004	757/52	9 bucks, 20 does	2 bucks	60%	1.1
2005	876/50	12 bucks, 17 does	2 bucks, 1 doe	64%	1.6
2006	1,016/37	9 bucks, 32 does	2 bucks	97%	2.68
2007	1,203/37	9 bucks, 31 does	2 bucks	95%	2.8
2008	1,088/47	8 bucks, 38 does	2 bucks	86%	3.0
2009	1,667/47	10 bucks, 42 does	2 bucks	87%	2.7
2010	1,336/47	8 bucks, 44 does	2 bucks	84%	6.3
2011	1,831/47	10 bucks, 23 does	2 bucks	88%	2.6

RECRUITMENT SURVEYS

Fawn and doe fall classification counts were conducted in September and October to determine fawn recruitment rates across the state. A total of 11,820 deer were classified during the fall of 2011; 1,228 deer for the Black Hills, 3,406 for West River Prairie and 7,186 for East River Management Units.

Fall classification counts for 2011 in the Black Hills resulted in a whitetail fawn/doe ratio of 0.64 and mule deer ratio of 0.67, which was a 4% decrease for whitetails and a 12% decrease for mule deer from the previous year. West River fawns per doe ratios were 0.90 for whitetails and 0.67 for mule deer, down substantially from 2010 ratios of 0.97 and 0.78, respectively. East River whitetail ratios were also down, going from 1.05 fawns per doe in 2010 to 0.91 in 2011.

Fall recruitment survey data for South Dakota, 2011.

	White-tailed Deer			Total	F:100D	B:100D	Mule Deer			Total	F:100D	B:100D
	# Fawns	# Does	# Bucks				# Fawns	# Does	# Bucks			
Region 1	GFG	GG	II	IIG	JI	GE	FHF	FII	IE	HFI	IJ	G
Region 2	FFEJ	FOEJ	HI	GIG	JG	G	IGG	IIH	GI	FHJG	IG	IG
Region 3	FHEG	FIIH	IIF	HFI	JF	HF				AE	AE	AE
Region 4	FEFI	FFIF	IEH	GIF	IJ	H				AE	AE	AE
Prairie	HIE	IEEJ	FGH	IIG	JF	HF	IIH	IHE	HG	FIFE	II	HJ
West River	IIG	JH	GI	FJI	JE	GH	IIH	IJI	GI	FIFG	II	H
East River	GJI	HEI	FEI	III	JF	HH	JE	FH	IH	GJ	II	II
Black Hills	HJI	IGF	FG	FFIF	II	GE	GJ	IH	FI	II	II	H
STATEWIDE	4,036	4,630	1,357	10,023	87	29	582	873	342	1,797	67	39

WORKING POPULATION ESTIMATES - DEER

All prairie deer units were divided into five data analysis units (DAU's). Deer within individual DAUs were assumed to have similar demographics. Annual survival (*s*) and hunter harvest mortality [(*hm*)-the proportion of total mortality caused from hunter harvest] rates were estimated based on recent research findings obtained in those designated DAU's or the Northern Great Plains Region. Survival and *hm* rates were quantified separately between species and geographical area. The 2011 harvest projections (*h*) (including total harvest of all user groups combined) were calculated for each Prairie deer unit and then analyzed at the DAU level. The 2011 post-reproduction population estimate (*n*) was then formulated for each DAU and combined for a east and west river prairie estimate using the formula: $N = ((h)/(hm)) / (1-s)$.

Pre-season estimates for deer are derived when populations are at their highest before any hunting or other sources of mortality have occurred. Therefore, pre-season estimates for deer do not take into account additional mortality factors that occur on populations over the summer months.

The pre-reproduction estimates (*pN*) (remaining population after all mortality factors are taken into account) were then derived for each DAU using the formula: $pN = (n) - ((h)/(hm))$

All Black Hills deer units were combined into one DAU. Black Hills deer populations were estimated separately for each species. Data obtained through the fall deer classification survey estimated an overall white-tailed deer fawn:doe ratio of 0.64:1 and a buck:doe sex ratio of 0.30:1. Mule deer estimates included a fawn:doe ratio of 0.67:1 and a buck:doe ratio of 0.35:1. Survival estimates and cause-specific mortality information quantified over the last 15 years was calculated using radio-collared individuals throughout the Black Hills. Predation rates were obtained through recent predator-prey interaction findings and these rates were included in modeling procedures along with the 2011 firearm, archery, muzzleloader, and youth hunter harvest information.

Species	Geographic Area	2011 Pre-season Estimates
White-tailed Deer		
	East River & West River Prairie	405,000
	Black Hills Proper	37,800
Mule Deer		
	East River & West River Prairie	115,000
	Black Hills Proper	8,100

SPORTSMEN AGAINST HUNGER

In fall and winter 2011-12, 78,735 pounds of game meat were provided to needy families through SDSAH and local food relief agencies. This meat was primarily a result of hunters donating 1,891 deer, 46 antelope, 2,811 pheasants and 2,044 Canada geese. Other game meat came from community game meat food drives, hunter direct donations of processed meat to food relief agencies, and salvage processing of confiscated or non-hunter killed game.

South Dakota hunters have now donated nearly 633,500 pounds of venison to needy families since 1993. That's 2,534,000 meals of meat for the hungry!

In fall 2012, big game processing certificates are worth \$50 for each donated antlerless deer, and \$40 for each donated doe or fawn antelope. Some processors will accept the certificate value as full payment for processing donated big game animals. However, others may charge more than the certificate value for processing donated animals and the hunter is responsible for paying any remaining fee at the time of donation.

DISEASE

Chronic Wasting Disease

The Animal Industry Board established specific requirements after CWD was first diagnosed in private, captive elk herds to prevent further introductions or recurrences in private, captive elk and deer herds. All captive herds that were infected or exposed have been depopulated, and a mandatory cervidae (deer and elk) CWD surveillance and control program for captive cervids has been implemented.

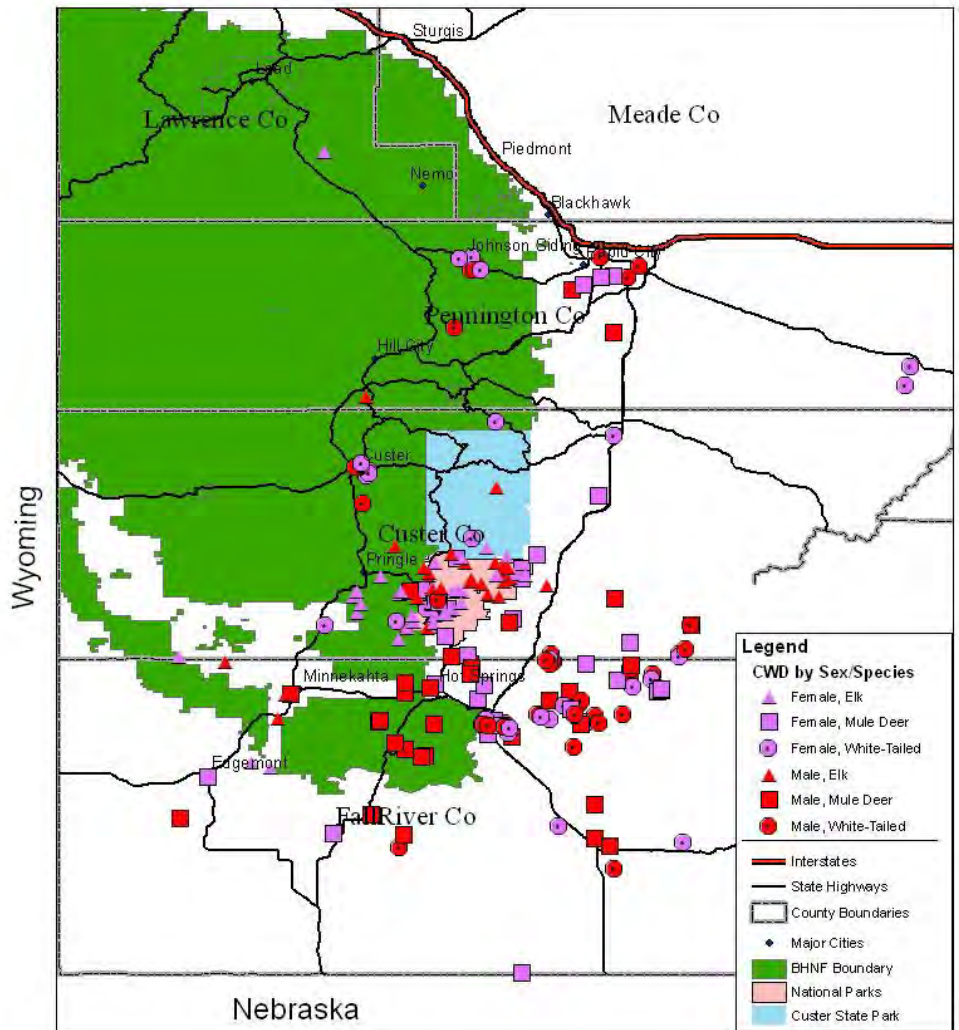
Joint management strategies for CWD have been aimed at intensified surveillance to determine to what degree CWD occurs in free-roaming animals. GFP, in cooperation with South Dakota State University and Wind Cave National Park, tested hunter-harvested animals, vehicle killed animals, sick animals, and research animals starting in 1997. Emphasis has been placed on testing elk and deer from areas near previously quarantined CWD private elk herd sites, areas where CWD has been found in wild animals, and sick animals from anywhere in South Dakota.

Animals tested from 1997-2012 by GFP and Wind Cave National Park consisted of 5,646 elk, 5,977 mule deer and 13,005 white-tailed deer. Two hundred and sixteen animals (150 deer, 66 elk) tested positive for CWD during this time period.

Animals tested from July 1, 2011 to June 31, 2012 by GFP and Wind Cave National Park consisted of 197 elk, 242 mule deer, and 970 white-tailed deer, and 1 moose. Forty-three animals tested positive for CWD during this CWD surveillance period. Twenty-eight deer and 2 elk were found by South Dakota Game, Fish, and Parks that tested positive for CWD. Wind Cave National Park found 12 elk and 1 deer that tested positive for CWD.

As of June 30, 2012, a total of 24,630 wild deer and elk have been tested for CWD in South Dakota and 66 elk and 150 deer have been found to have the disease. All CWD detected to-date in free-roaming wildlife has been in southwestern South Dakota and includes Lawrence County, Pennington County, Fall River County, and Custer County and Wind Cave National Park. Sick deer from several areas of the state are being tested as part of our CWD Surveillance Program, and no CWD has been found in other areas in South Dakota.

Chronic Wasting Disease Positives in South Dakota
2001 - June 2012



Steve Griffith
SD Dept of Game, Fish, and Parks
4100 Adventure Trail
Rapid City, SD 57102
605-394-4766
steve.griffith@state.sd.us

01.53 6 Miles
[Scale bar]

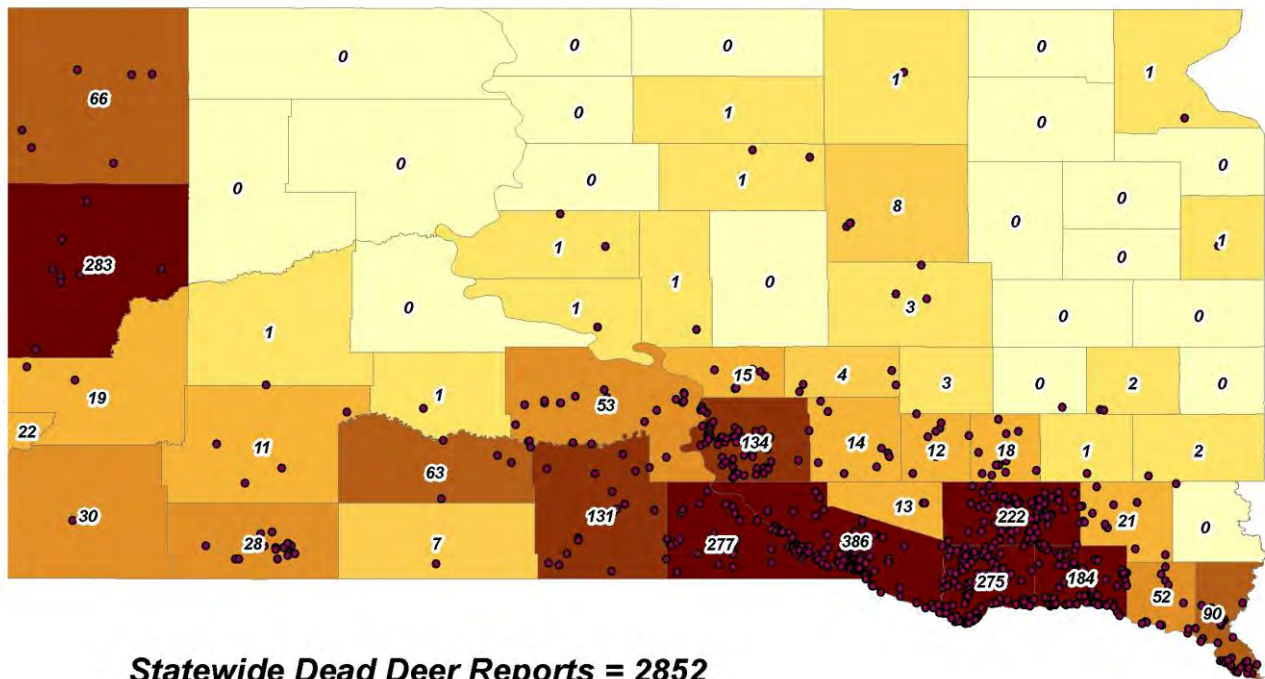


Epizootic Hemorrhagic Disease

The reports of deer deaths due to EHD in 2011 were the highest recorded in recent history, only to be surpassed by greater than twice the number of reports in 2012. So far GFP has collected reports on approximately 2,800 dead deer. EHD has been confirmed by the South Dakota State Diagnostics lab in 12 counties, but most deaths in all counties are presumably caused by EHD.

In attempts to reduce the impacts of the disease on herd growth and recovery in some units, GFP is offering license refunds for any deer license in the state. GFP has also removed leftover/unsold licenses in the firearms season, totaling about 2,500 tags being removed from the draw.

2012 Reported EHD Deer



Statewide Dead Deer Reports = 2852
Updated 02 October 2012

RESEARCH

Recently completed

Movement patterns, survival, and sightability of white-tailed deer (*Odocoileus virginianus*) in eastern SD (Robling, Kevin. 2011. South Dakota State University). *Abstract:* Limited information is available on white-tailed deer (*Odocoileus virginianus*) movements, survival, density, and resource selection in the Prairie Pothole Region of South Dakota where semi-permanent wetland densities are relatively high. Primary objectives of this study were to develop a sightability model for aerial surveying and document seasonal movement patterns and survival rates for white-tailed deer in this region. Secondary objectives were to calculate seasonal home ranges, daily and seasonal movements relative to management unit boundaries, determine cause specific mortality, and evaluate summer and winter resource use and selection. From February 2009 - February 2010, 43 adult female white-tailed deer along with 5 adult male white-tailed deer were monitored for survival and movements using radio telemetry. An additional 20 deer also were captured and ear-tagged. Capture methods included helicopter net guns and the use of Clover traps. A total of 6,877 locations was collected, with a mean 95% error ellipse of 1.8 ha. We documented a total of 55 seasonal movements during 4 migration periods.

Snow depth and temperature were the primary causes of seasonal migration. Mean migration distance between seasonal home ranges was 4.76 km (SE=0.38). A total of 119 individual home ranges was calculated during 4 periods of seasonal use. Mean 95% home range size was 2.94 km² ($n=58$, SE= 0.38) during winter and 1.49 km² ($n=61$, SE=0.10) during summer. No deer crossed management unit boundaries and no dispersals were documented throughout the study. Movement and migration distances were likely limited because of the juxtaposition of suitable habitat (i.e., wetlands and CRP grasslands) in the Clark County area. During this study, 17 deer died, and overall (24 month) survival rate was 0.55 (SE=0.08, $n=43$). Annual survival rates of female deer during 2009 and 2010 were 0.78 (SE = 0.08, $n = 26$) and 0.70 (SE = 0.08, $n= 37$), respectively. Seasonal survival rates for post-hunt, pre-hunt, and hunting seasons during 2009 and 2010 were 0.96 (SE= 0.04, $n=26$), 1.00 (SE < 0.001, $n= 25$), 0.84 (SE = 0.07, $n= 34$) and 0.94 (SE = 0.04, $n= 37$), 1.00 (SE < 0.001, $n= 36$), 0.72 (SE = 0.07, $n= 36$), respectively. Survival was predominately dependent on hunting, which was responsible for 64.5% of all mortalities. Liberal antlerless deer-tag numbers, lengthy hunting seasons, and high hunter densities likely influenced human related mortality of white-tailed deer in this region. Habitat categories encompassing 61 summer and 58 winter home ranges of 42 radiocollared female white-tailed deer were mapped during summer 2009 ($n=25$) and 2010 ($n=36$), and winter 2009 ($n=22$) and 2010 ($n=36$). We collected 4,688 summer locations and 1,826 winter locations via radio telemetry. Habitat use differed slightly between seasons with CRP grasslands, standing corn, and wetlands being used the most throughout summer home ranges and CRP grasslands, trees, and wetlands being used the most during winter. Overall, wetland habitat was used the most by deer in the Clark County area, and provided essential thermal and escape cover. We evaluated winter and summer resource selection using design II and III analyses. Analysis using design II demonstrated that trees ($\hat{w} = 3.81$) were selected with higher probability ($P<0.10$) when compared to all other habitats available for both winter and summer. During the winter, CRP grasslands ($\hat{w} = 1.45$) and standing corn ($\hat{w} = 2.89$) also were selected by deer. Design III analysis indicated that extensive variation existed between animals and the proportions of habitat categories found within individual home ranges; however, the model using all animals indicated that trees ($\hat{w} = 2.67$) were selected with higher probability than other habitats ($P<0.10$). In the spring of 2009 and 2010, a total of seven sightability flights was conducted in late April and early May when potential color differences between sun-bleached deer and spring green-up were present. In the winter of 2010 and 2011, a total of 8 flights were conducted in January and February when 100% snow cover was present and deer were in large winter herds. Several variables were collected during the flights including; group size, activity, habitat, and canopy cover. Deer were sighted in the winter at a rate of 84.4% (146/173) and spring sightability rate was 54.6% (88/161). Logistic regression analysis indicated that visibility was significantly influenced by group size and canopy cover for both models. The winter model estimated deer sightability as $\mu = 3.064 + 0.044$ (group size) – 1.13 (canopy cover) and the spring model estimated deer sightability as $\mu = 2.297 + 0.252$ (group size) – 1.10 (canopy cover). These models will assist South Dakota Game, Fish and Parks in estimating population size of white-tailed deer in agricultural dominated landscapes throughout eastern South Dakota.

Nutritional Ecology Of White-Tailed Deer: Assessment Of An Index To Diet Quality And A Repellent

(Monteith, Kyle. 2012. South Dakota State University). *Abstract.* Concentration of fecal nitrogen has been used widely as an indicator of forage quality for free-ranging ruminants. Differences in digestive function between species of dimorphic ungulates render interspecific comparisons of fecal nitrogen unreliable; however, it is unknown whether sexual differences in digestive function also may bias this nutritional index. My objective was to compare sex-specific variation in the concentration of fecal nitrogen using male, non-lactating female, and lactating female white-tailed deer (*Odocoileus virginianus*) on control and restricted diets. During weekly trials, I monitored intake rates, collected feces twice daily, and used Micro Kjeldahl procedures to determine percent fecal nitrogen. I also determined nitrogen content of feces following a neutral detergent fiber (NDF) rinse during pre-, peak-, and post-lactation. Fecal nitrogen reflected general differences in dietary quality between diets; however, fecal nitrogen of lactating females in both dietary groups was lower ($P < 0.05$) than for males or non-lactating females throughout the lactation period. In addition, nitrogen concentration following a neutral detergent fiber rinse was lower for lactating females during peak lactation. I hypothesize that the remodeling of the digestive tract by lactating females enhances their ability to extract nitrogen from their forage; therefore, fecal nitrogen is influenced by reproductive status of females. Agricultural producers lose millions of dollars annually to depredation caused by ungulates; although multiple repellents exist for deer, most are ineffective. Tannins are a plant defensive compound that have an astringent taste, reduce digestibility, reduce protein availability, and are toxic to rumen microbes, resulting in the reduction in feeding by large herbivores. I hypothesized that chemical application of tannins to soybeans and other forages would provide a non-lethal method to reduce crop depredation in areas susceptible to deer damage. I designed an experiment to test the effectiveness of tannins at deterring feeding by captive white-tailed deer (*Odocoileus virginianus*) on soybeans and other forages in 2010-2011. First, using a cafeteria trial, I monitored weekly intake rates of captive deer ($n=10$) offered a highly-preferred feed treated with varying concentrations of quebracho tannins (control, 3%, 5%, 10%, and 20%). Second, I manipulated food plots ($n=3$) by treating 3 separate blocks with different concentrations (0% [control], 10%, and 20%) of tannins. I monitored feeding preference relative to tannin treatments within food plots three times per week, during mid- (May – July) and late-summer (August – September) using scan sampling. During cafeteria trials, intake rate of control feed was at least three times greater (all $P<0.05$) than all other tannin treated feeds. Similarly, in manipulated food plots, application of 10% and 20% tannins resulted in a 72% and 89% reduction in probability of feeding during the summer; this pattern of preference was intensified when trials occurred on consecutive days ($P<0.001$). Strategic application of tannins to agricultural crops may provide a natural deterrent to deer depredation. In a free-ranging assessment, I designed an experiment to test the effectiveness of tannins to deter feeding by white-tailed deer on corn and soybeans in areas of high white-tailed deer density in 2010-2011. I monitored depredation in strategically placed plots ($n = 25$) in agricultural fields in eastern South Dakota. Each plot consisted of three treatments; control, 10% tannins, and 20% tannins. I counted number of plants browsed on a weekly basis to assess total amount of depredation. In 2011, I added an

adjuvant to the tannin concentration to increase retention on the plants. Corn and soybean plots without the adjuvant deterred feeding 7% to 36%, whereas corn and soybeans with the adjuvant deterred feeding by 0% to 20%. Strategic application of tannins to agricultural crops may provide a natural deterrent to deer depredation.

RESEARCH

Current Projects

Estimation of mule deer populations using aerial surveys in western and central SD (Griffin, Steve. SDGFP) *Objectives:*

1. To determine and evaluate factors affecting sightability of mule deer during winter and spring green-up in western and central South Dakota.
2. To develop an aerial survey model for estimating population size of mule deer in western and central South Dakota.
3. To collect information on home range size and seasonal movements of mule deer in South Dakota.
4. To estimate survival rates and determine mortality factors of mule deer in South Dakota.

Estimating population size of deer in the Black Hills (Cudmore, Kris. South Dakota State University)

Objectives:

1. Estimate population size of deer in the Black Hills using general randomized tessellation stratified samples by 30 June 2014.
2. Compare estimates of population size of deer among management units by 30 June 2014.
3. Evaluate factors affecting population size of deer relative to management units in the Black Hills by 30 June 2014.
4. Develop population model and survey methodology and recommendations to South Dakota Department of Game, Fish and Parks for implementation in the Black Hills by 30 June 2014.

Evaluation of deer and pronghorn herd composition surveys (Cudmore, Kris. South Dakota State University). *Objectives:*

1. Determine minimum sample size requirements
2. Compare September and October counts for deer, August and September for pronghorn
3. Compare spotlight and daylight counts
4. Assess feasibility of obtaining male:female ratios
5. Evaluate impacts of other survey variations such as a) counting all animals observed vs. only conclusive counts, b) distance from cover, and c) number of observers.

Dietary preference and nutritional quality of annual forages planted during late summer for white-tailed deer in eastern South Dakota (Wieberg, Troy. South Dakota State University). *Objectives:*

1. Determine preference and use of purple top turnips, winter rye, Austrian winter pea, Chicory, Daikon radish, and Crimson clover by captive white-tailed deer by 30 June 2015.
2. Quantify physical and nutritional characteristics among forage types and determine crude protein, phosphorus, crude fat and digestible dry matter for each species by 30 June 2015.
3. Assess feasibility of which forage types would be most suitable for late summer planting conditions in eastern South Dakota by 30 June 2015.
4. Formulate management recommendations that directly apply to maximizing deer harvest in highly depredated areas using annual forage plots by 30 June 2015.
5. Determine what annual forage species would be the most successful at luring deer away from winter depredation areas (i.e., hay yards and feedlots) by 30 June 2015.

Determining impacts of mountain lions on bighorn sheep and other prey sources in the Black Hills (Smith, Josh. South Dakota State University). *Objectives:*

1. Assess prey selection of mountain lions during the bighorn sheep lambing period.
2. Evaluate seasonal and annual consumption rates for prey of mountain lions.
3. Determine cause-specific mortality of adult ewe and lamb bighorn sheep.
4. Determine impact of disease on the reproductive potential of bighorn sheep.



WISCONSIN DEER STATUS REPORT, 2012

Midwest Deer & Wild Turkey Study Group
Custer State Park, Custer, South Dakota
Robert E. Rolley

POPULATION GOALS

In the Northern and Central Forest regions population goals have been set relative to environmental carrying capacity. In the three farmland regions, goals have primarily been set relative to human tolerance for deer. Prior to 2010, overwinter goals ranged by unit from 10 to 30 deer/mi² 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 was 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.

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 during the early to mid-2000s reduced populations in portions of the state. Reduced antlerless harvests since 2009 have set the stage for renewed population growth.

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. This harvest increase was due largely to population growth in the farmland regions. Harvest fluctuated considerably during the 1990s around an overall increasing trend. An all-time record harvest of 618,274 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 but increased 2% in 2010 and 3% in 2011. The percentage of the harvest composed of antlerless deer averaged 56% during the past 3 years. The proportion of the total harvest taken by archers has increased steadily during the past 50 years to where archers accounted for 26% of the total harvest and 29% of the antlered buck harvest in 2011.

HUNTING SEASON SUMMARY - 2011

The 2010 posthunt population was estimated to be approximately 1.1 million. The winter of 2010-11 was rated as mild for the Northern Forest Region. Observations of fawns and does in summer 2011 indicated that recruitment was below the long-term average in all regions (Northern Forest -13%, Central Forest -17%, Eastern Farmland -3%, Western Farmland -15%, Southern Farmland -15%). The estimated statewide fall 2011 population was approximately 1.5 million.

The 2010 archery season was held during September 17 – November 17 and November 19– January 9 (Figure 3). In most management units, archers were allowed to harvest one antlered and one antlerless deer during the season, but in 8 units archers were restricted to

bucks only. In many units, archers were allowed to harvest additional antlerless deer using free herd control antlerless permits, CWD antlerless permits or purchased antlerless deer permits. More than 250,000 people purchased archery licenses in 2011. Archers killed approximately 90,200 deer (~44,400 antlered, ~44,700 antlerless, and ~1,000 unknown). This was the 7th highest archery harvest on record. Approximately 90% of the archery harvest occurred prior to the November gun season.

A 2-day either-sex gun hunt was held statewide on October 8-9 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. Young hunters were required to be accompanied by an adult. Approximately 5,000 deer were harvested during this season.

A 4-day antlerless gun hunt was held October 13-16 in 17 units in the CWD Management Zone. The archery season remained open during these 4 days but archers were limited to antlerless deer and were required to wear blaze orange. Approximately 2,000 deer were killed with a gun in this season.

Sales of 621,847 gun deer licenses in 2011 were similar to sales in 2010 but were 10% below the 2001 pre-CWD level. The opening day of the firearm season was November 19. Temperatures on the opening morning ranged from the high 20s to the low 30s, warming during the day to the high 40s to low 50s. Light rain started about mid-day in the south and rain changed to snow in the northern 1/3 of the state. Two to six inches of snow were on the ground by Sunday morning in northwestern and northcentral Wisconsin. Snow hanging in trees may have hampered visibility in some parts of the northwest. Monday was cooler with highs in the mid-20s in the north to low 40s in the south. Temperatures warmed throughout the week with little precipitation until Friday and Saturday when rain spread from west to east. Much of the snow that fell in the north had melted by Thursday. Corn harvest was ahead of the 5-year average, with about 90% of the harvest complete by mid-November.

Approximately 228,600 deer (100,800 antlered, 126,400 antlerless, and 1,400 unknown) were killed during the 9-day November gun season. The 10-day muzzleloader-only season (November 28-December 7) resulted in a harvest of about 7,100 deer (2,400 antlered, 4,700 antlerless, and 66 unknown).

A 4-day antlerless gun season was held December 8-11 statewide and in the CWD units an either-sex gun season was held December 24-January 8. Hunting conditions during these December seasons were fair with above average temperatures during much of the month.

Only portions of the northern part of the state had more than 1-2 inches of snow on the ground during December gun seasons. Approximately 14,800 deer (1,300 antlered, 13,200 antlerless, and 250 unknown) were harvested during the December gun hunts.

In all seasons, gun hunters registered 257,511 deer. This was slightly higher than the gun harvest in 2010 (+1.8%). The gun season antlered harvest was 106,396 (+0.1% from 2010) and the antlerless harvest was 149,215 (+3.2% from 2010). The combined bow and gun season harvest was 150,839 bucks and 193,954 antlerless deer. The Ojibwe tribes harvested an additional 508 antlered bucks and 831 antlerless deer in the ceded territories outside of reservations.

In total, more than 654,500 people purchased a deer hunting license (either gun, archery, or both). Of these, approximately 248,000 hunters (38%) killed and registered at least 1 deer in 2011.

A gun harvest quota of approximately 343,400 antlerless deer in non-CWD units was established for the 2011 gun season compared to 245,600 antlerless deer in 2010. Each hunter received 1 free antlerless permit valid in any of 64 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 108,200 unit-specific antlerless permits were available in 27 "regular" (buck-plus-quota) management units.

Approximately 27,400 deer were checked for sex and age at 116 of the 608 registration stations during the 2011 gun deer season. In the Northern Forest, the percentage of harvested bucks that were yearlings (59%) was above the 5-year average (52%). The percentage of yearlings among does (32%) was above the 5-year (27%) and 10-year (27%) averages in the Northern Forest. In the Central Forest the percentage of yearlings among harvested bucks (55%) was similar to the 5-year average (54%) and the percentage of yearling does (26%) was also similar to the 5-year average (27%). The farmland regions continued to show below average percentages of yearlings among bucks (41-57%) suggesting increased survival of bucks. Yearling doe percentages (30-38%) were similar to or slightly below the 5-year average in the farmland regions, although there has been a gradual downward trend in recruitment evident during the past 20 years in the southern and western farmland regions.

Antler development of yearling bucks was slightly below average in the Northern Forest (53% of yearlings had forked antlers compared to a 37-year average of 57%, Figure 4). The percentage of yearling bucks with forked antlers in the Central Forest in 2011 was 14% higher than the long-term average. Antler development in the farmland regions was near the long-term average; 85% of yearlings had forked antlers.

Seven non-fatal hunting accidents were reported during the 9-day November gun season. Two non-fatal accidents occurred during the archery, muzzleloader, and supplemental gun seasons in 2011. In 44% of the accidents, the shooter and victim were members of the same hunting party and in 44% of the accidents, hunters shot themselves.

WINTER 2011-12

The average winter severity index (WSI) for the 34 recording stations with complete records was 21 (mild) compared to a 30-year average of 52. On average, snow depths greater than or equal to 18 inches were recorded on only 7 days in 2011-12 and minimum temperatures less than or equal to 0°F occurred on 14 days. No stations reported severe (WSI > 80) or moderate (WSI = 50-80) conditions. The winter of 2011-12 was the 3rd mildest winter since record keeping began in 1960 and was the 3rd mild winter in a row. Recruitment of fawns and yearlings are expected to be above normal throughout the majority of the Northern Forest in 2012.

LEGISLATION

In November 2011, the governor signed a bill into law that prohibited the DNR from requiring hunters to harvest an antlerless deer before they could harvest an antlered deer, thereby repealing earn-a-buck regulations used by the Department to facilitate herd reduction in units where the population substantially exceeded goals. The bill also prohibited the Department from scheduling gun hunting seasons prior to the Saturday preceding the Thanksgiving holiday unless the season is specific for young hunters, hunters who are learning to hunt, disabled hunters, or to combat disease in the deer population. In any case the early gun season must end before October 15.

2012 SEASON PLANNING

Following the close of the 2011 deer season, Department staff conducted their regular review of deer population and harvest data. The statewide posthunt white-tailed deer population estimate for 2011 was approximately 1,149,900. This was 45% above the statewide goal of approximately 794,200. Posthunt 2011 population estimates were more than 20% below goal in 6 deer management units while in 69 units they were more than 20% above goal. The statewide posthunt 2011 population estimate was essentially unchanged from 2010.

Wildlife management staff held 36 deer management public information forums across the state in March to provide the public with current information about deer harvest, population

status and to gather information from hunters. Total attendance was nearly 1,200. In addition the public was able to obtain unit-specific information and provide feedback via the DNR's website. More than 6,500 web surveys were completed. Staff also participated in deer expos in Eau Claire, Green Bay, Madison, and Milwaukee.

The Department presented its deer season proposal to the Natural Resources Board in April. The proposal was described as an attempt to strike a balance between the social and biological interests expressed by various stakeholders. The proposal was designed to make the hunting season enjoyable and satisfying while fulfilling our obligations as herd managers. Antlerless permit levels were closely scrutinized by agency staff because of concerns expressed by many hunters. Historic demand for antlerless permits was given a great deal of consideration in setting permit levels.

2012 DEER SEASON

Outside of the CWD Management Zone and Metro Units, there are two types of season structures in 2012: regular (R) and herd control (HC) (Figure 5). Season dates are the same for these two structures:

- Bow– Sept. 15 - Nov. 15 and Nov. 17 - Jan. 6 (R, HC)
- Youth Deer Hunt– Oct. 6-7 (R, HC)
- Gun - Nov. 17– Nov. 25 (R, HC)
- Muzzleloader–Nov. 26 - Dec. 5 (R, HC)
- Antlerless-only Hunt– Dec. 6 - Dec. 9 (R, HC)

Regular units have deer populations below, at, or near goal. Harvest limits in most (50) 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 on Saturday, August 18th. 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 (6) have been designated as bucks-only for 2012. 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. Forty-four units are designated as Herd Control units in 2012.

CHRONIC WASTING DISEASE MANAGEMENT

Deer hunting seasons within the management zone during 2011 included an archery season during September 17-January 8; gun seasons during October 8-9 (youth only), October 13-16, November 19-27, December 8-11, and December 24-January 8; and a muzzleloader season November 28-December 7. Modified earn-a-buck regulations were used in 2011-12 in the CWD Management Zone. The first buck harvested under an archery license and the first buck under a gun license were exempt from an earn-a-buck requirement, earn-a-buck still applied for additional bucks. An unlimited number of antlerless and "earned" bucks could be taken. The October 13-16 and December 8-11 gun hunts were antlerless only. Free landowner permits were issued in 2011 to authorize additional harvest after the close of the deer seasons. More than 54,900 deer (55% antlerless) were removed from the CWD management zone in 2011-12.

Disease surveillance activities in 2011 were focused in and around 2 monitoring areas

associated with the eastern and western disease clusters, and north, west, and northwest 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 4,870 deer from the CWD Management Zone were tested in 2011-12 and 238 tested positive. To date, more than 172,000 deer have been tested with a total of 1,814 free-ranging deer testing positive for CWD (Figure 6).

There has been an overall increasing trend in prevalence in all sex and age classes in the western Wisconsin core monitoring area (Figure 7). Since 2002, prevalence in adult males has risen from about 8 percent to about 18 percent and in adult females from about 3 percent to approximately 7 percent. During that same time, the prevalence trend in yearling males has increased from about 2 percent to about 6 percent and in yearling females from less than 2 percent to about 5 percent. Prevalence increases are also evident in the eastern monitoring area where prevalence in adult males has increased from about 2% to about 6% during 2003-2011.

A clinical suspect deer was reported on the first day of the November gun season in Washburn County in northwestern Wisconsin. An adult doe was shot by a sheriff deputy and it subsequently tested positive. This is the first wild CWD-positive deer to be found in northern Wisconsin and within the Ceded Territory where the Ojibwe Tribes maintain harvest and gathering rights. Baiting and feeding of deer have been banned in Washburn and the adjoining counties of Burnett, Polk, and Barron. A local citizen advisory committee has been formed and a public information session was held in August. Intensive sampling within a 10-mile radius of the positive is planned for this fall. Genetic testing of the positive deer indicates that its DNA is consistent with that of free-ranging deer in the local area.

A 4-day antlerless only gun hunt has been held in the CWD Management Zone annually since 2002. The legislation that banned earn-a-buck regulations also made it necessary for the Natural Resources Board to annually approve an emergency rule to continue the October gun hunt; the Board approved the rule in April. However, Board approved rules must also be approved by the Governor. In August the Governor announced that he was suspending the October season stating "eliminating the 4-day October hunt in the CWD zone is one of the most simple and most effective ways we can show hunters that we are listening."

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).

During 2011, 347 wildlife damage claims were submitted to WDACP, reflecting \$1,840,868 in appraised losses, with \$1,251,010 eligible for payment. The number of claims submitted in 2010 was 24% lower and the assessed damage was 19% lower than in 2008. Wildlife damage claims were filed in 57 of the 70 counties enrolled in the program in 2011. Deer damage represented 77% of appraised losses statewide. Statewide, the primary crop damaged by deer was corn (appraised loss \$749,226), followed by soybeans (appraised loss \$221,482) and forage (appraised loss \$137,860). The most commonly used abatement measure was deer damage shooting permits. In 2011, we issued 487 Agricultural Damage Deer shooting

Permits under which 2,976 deer were removed. In addition, 51 Nuisance Deer Shooting Permits were issued for urban, airport, and nuisance situations, resulting in the removal of 288 deer.

In 2011, WDACP paid 75% of the cost for construction of 8 permanent fences on farms with a history of deer damage to high value crops (e.g., cranberries, strawberries, orchards, and tree nurseries). Landowners enter into a 15 year agreement to maintain the fences. Estimated savings from deer damage over the 15 year period was approximately \$797,500.

Since 2000, the WDACP has been authorized to pay for processing venison donated to food pantries. In 2011, 126 meat processors in 57 counties chose to participate in the donation program. In those counties, hunters donated 2,879 deer amounting to approximately 129,555 pounds of venison. The cost of the venison donation program in 2011 was approximately \$175,300, 91% for venison processing and 9% for advertising and administration.

WHITE-TAILED DEER TRUSTEE

During his campaign, the governor stated he would appoint a “Whitetail Deer Trustee” to “revise our deer counting system”. In October 2011, the Governor issued an executive order directing the Department of Administration (DOA) to retain an “independent expert with recognized scientific credentials and demonstrated experience in the field of Whitetail Deer management to review Wisconsin’s deer management practices. DOA promptly announced that it was contracting with Dr. James Kroll, to provide the state with an independent, objective, and scientifically based review of Wisconsin’s deer management practices. The review was to be completed by June 2012.

Kroll contracted with Drs. Gary Alt and David Guynn, Jr. to assist him with the review. The reviewers developed a website and invited individual citizens to provide input on issues of their concern with about 1,500 people submitting comments. Topics of concern expressed most often included too many predators, DNR does not listen, inaccurate population estimates, eliminate earn-a-buck, and baiting. The reviewers also compiled a list of information requested from the WDNR. A daylong meeting was held in November at which DNR staff described many aspects of the deer management program and delivered the requested documents and data. Additional meetings were held with representatives from other state agencies, universities, tribes, and various stakeholder organizations. A preliminary report was delivered in March 2012 and 6 town hall meetings were held across Wisconsin in April to present findings and solicit solutions. The final report was delivered in June 2012.

The final report contained over 60 specific recommendations related to population management; hunting regulations, seasons and bag limits; predator studies and management; chronic wasting disease; harvest data, herd health and productivity; habitat; people; DNR research and technical publications; Conservation Congress; and personnel. As a first step toward implementation of the recommendations, the DNR hosted a stakeholder forum at the end of July. Attendees included representatives of most of Wisconsin’s statewide wildlife and hunting conservation organizations, woodland landowners, county forests, federal agencies, universities, tribes, and the captive cervid industry.

The DNR has begun an analysis of the needed actions to implement the recommendations. Much of the current deer management system is specified in state statute or administrative rules, so significant changes in the system will require legislative and/or Natural Resources Board approval.

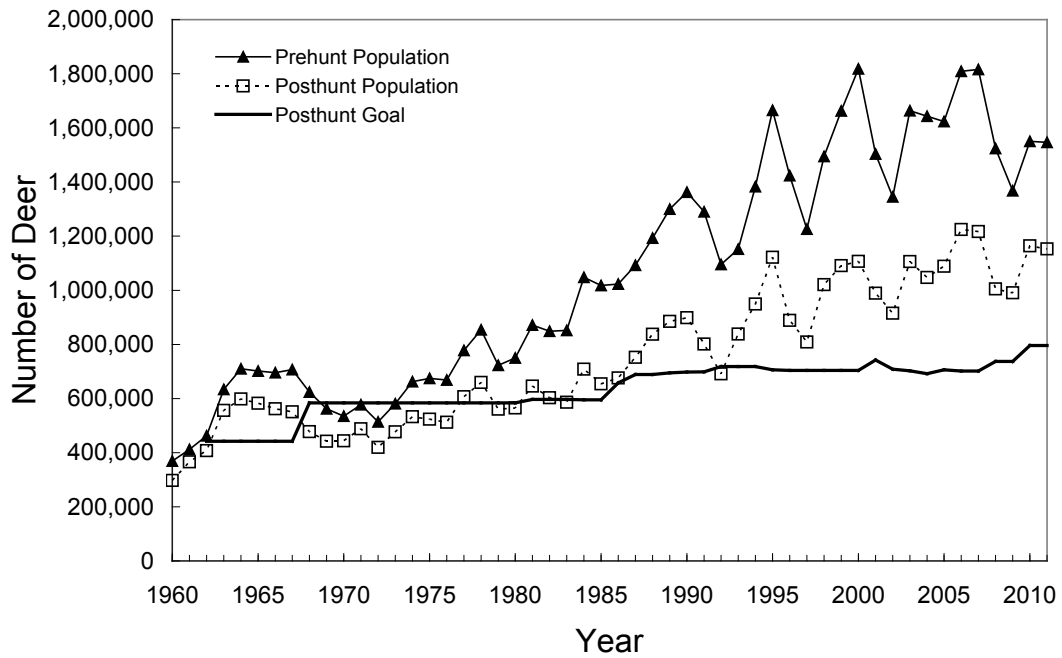


Figure 1. *White-tailed deer population estimates in Wisconsin, 1960-2011.*

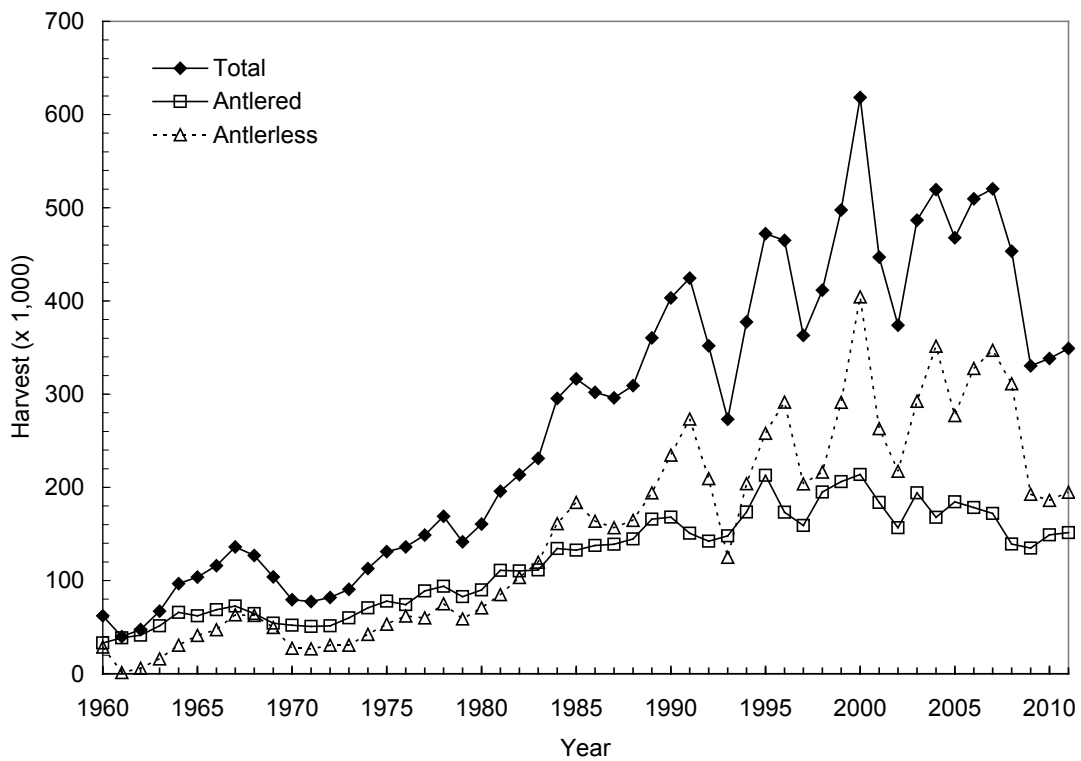


Figure 2. *Number of antlered, antlerless, and total deer harvested during gun and archery seasons in Wisconsin, 1960-2011.*

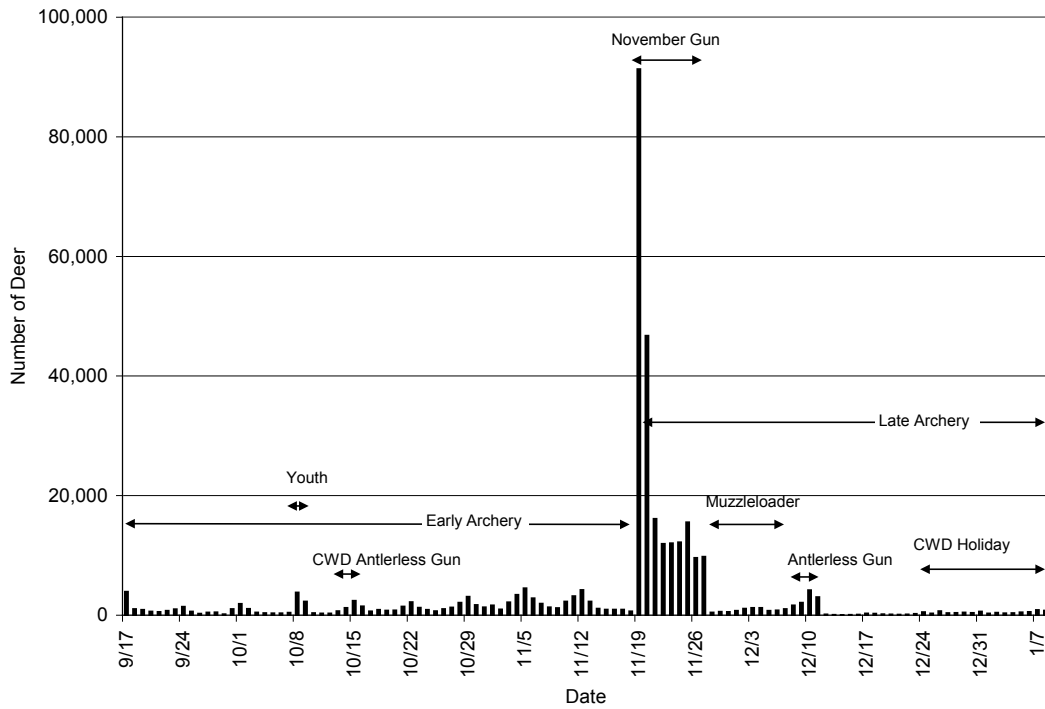


Figure 3. Number of deer killed by day of the 2011 deer season.

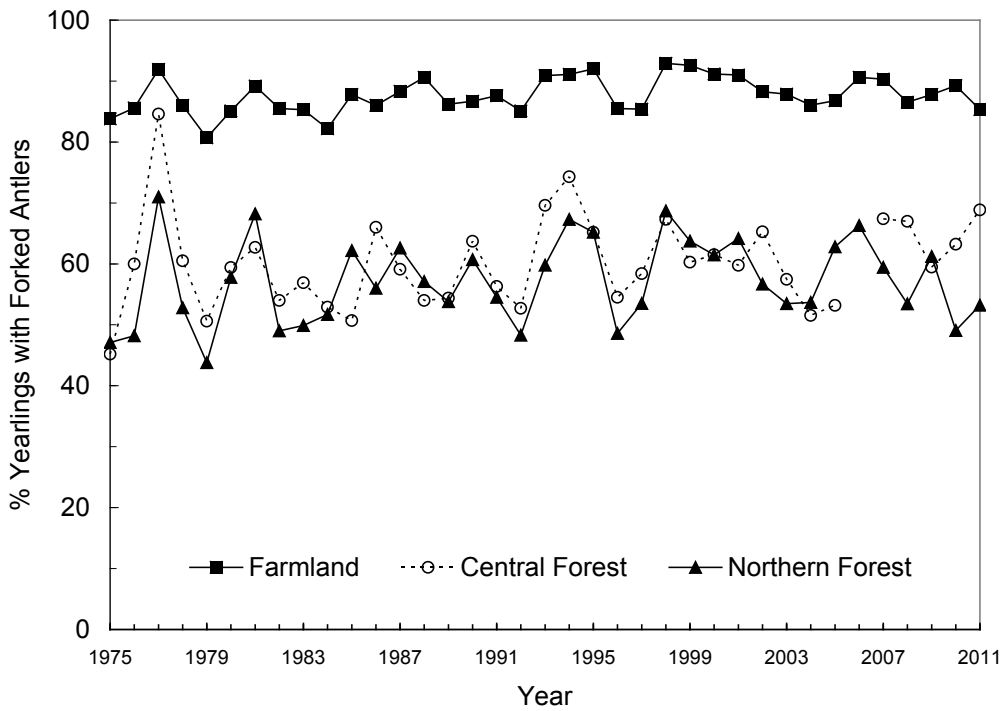
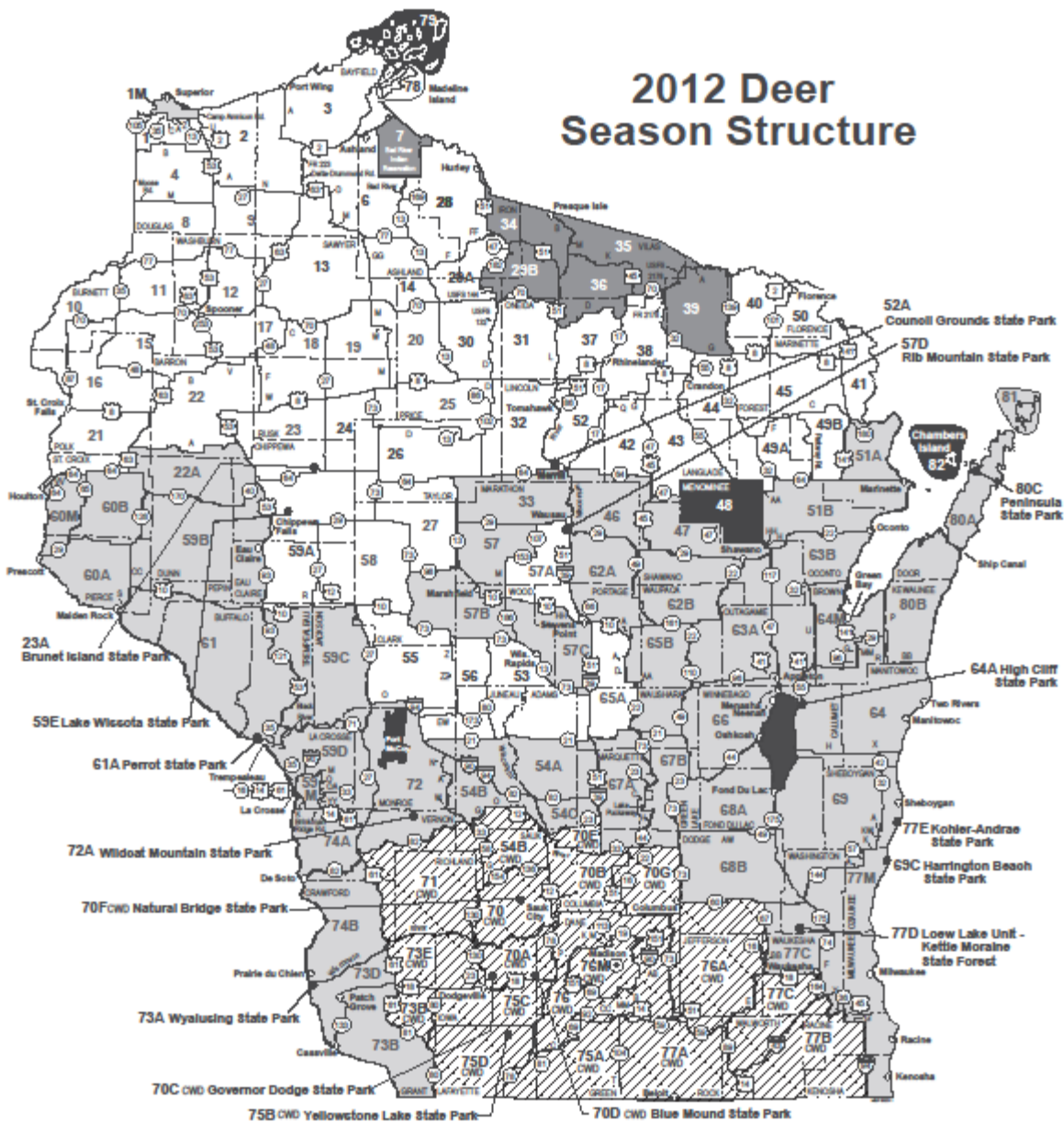


Figure 4. Yearling antler development in the principle deer habitat regions, 1975-2011.

2012 Deer Season Structure



- Regular Unit** - Bucks plus \$12 bonus antlerless permits
- Herd Control Unit** - Bucks plus \$2 antlerless permits
- Bucks Only** - (DMUs 7, 29B, 34, 35, 36, & 39)
- Non-Quota Area** - No permits issued by DNR
- CWD Unit** - 1 archery buck, 1 gun buck, plus antlerless permits. Bonus Buck rules apply.

• Unit 48 firearm season is for tribal members only - season set by Menominee Tribe

Figure 5. Deer season frameworks in Wisconsin, 2012.

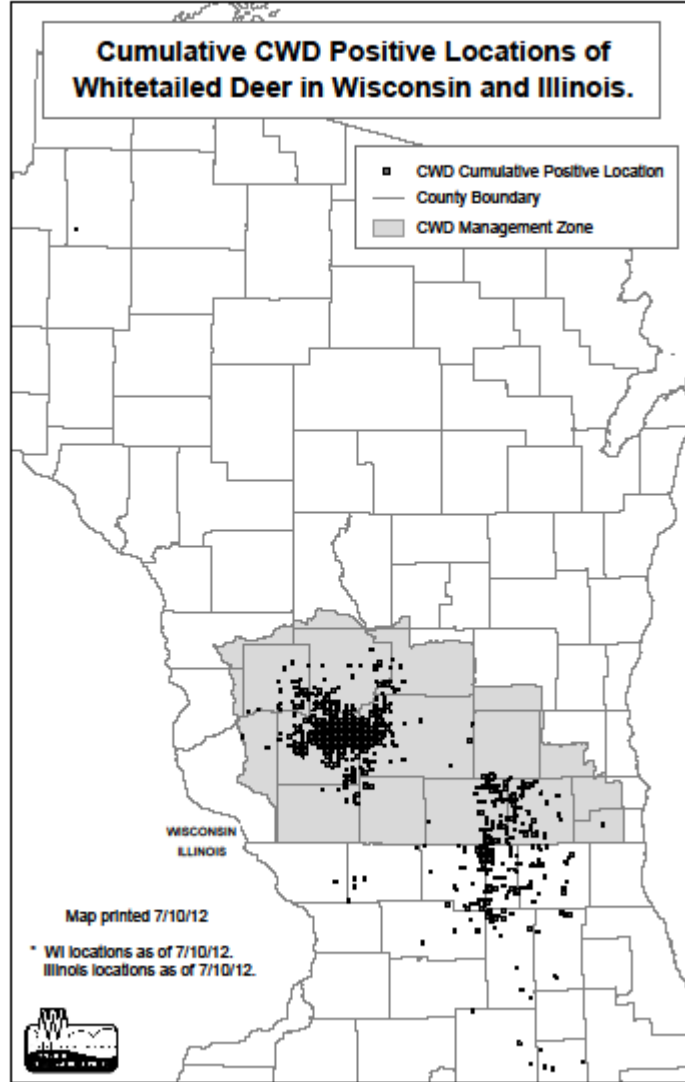


Figure 6. *Distribution of CWD positive deer in Wisconsin and northern Illinois, 2002-2011.*

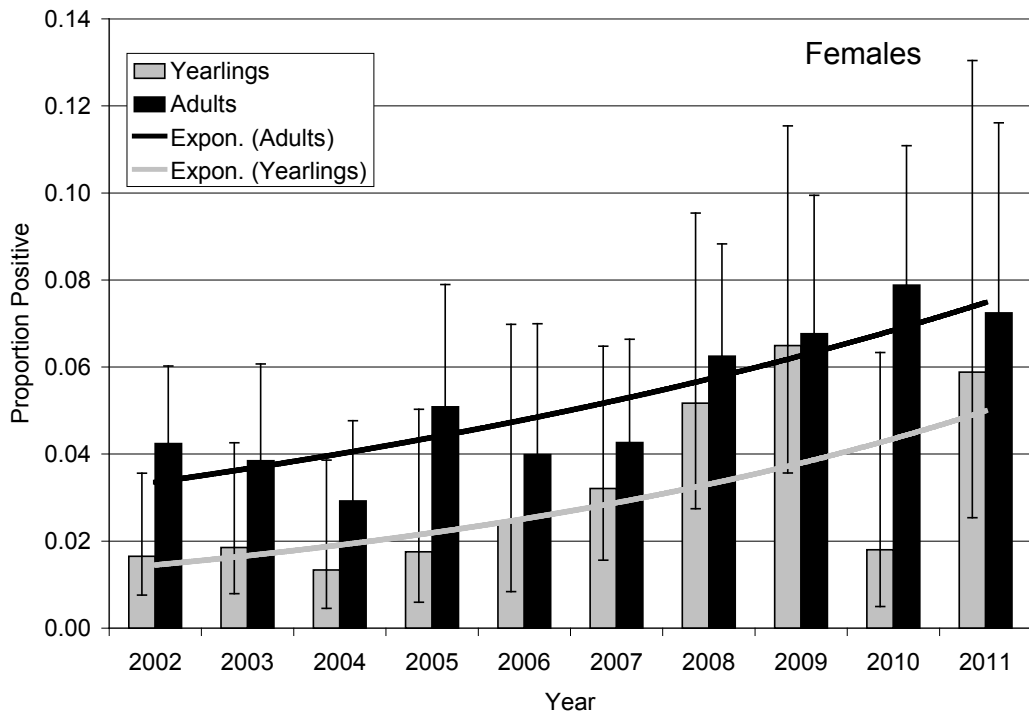
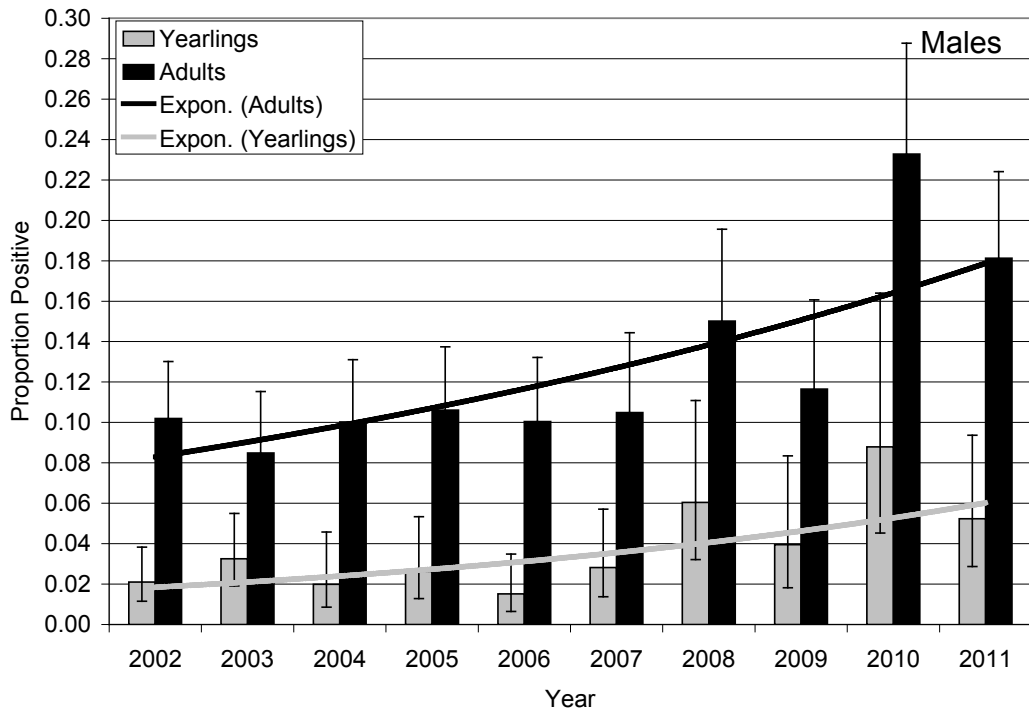


Figure 7. CWD prevalence (\pm 95% confidence intervals) in yearling and adult male and female hunter harvested white-tailed deer from the western core monitoring area, 2002-2011.

Appendix 4. Annual turkey status reports submitted by participant states and provinces at the MDWTSG meeting in 2012, South Dakota.

Agency Turkey Reports



Midwest Deer and Wild Turkey Study Group
16-19 October 2012, Blue Bell Lodge
Custer State Park, South Dakota

ILLINOIS WILD TURKEY REPORT NARRATIVE
MIDWEST DEER & WILD TURKEY STUDY GROUP
CUSTER STATE PARK, SOUTH DAKOTA – 2012

HARVEST

Only minor changes were made to any of the quotas in 2012, with those occurring on some state sites. Youth harvest was a new state record with 1,300 birds harvested during the youth seasons, compared to 703 the previous year. The overall Spring Turkey harvest of 15,941 was 5.4% higher than the 2011 harvest.

BROOD SURVEYS & DEER HUNTER SIGHTINGS

We continue efforts to improve our brood survey information. In 2010, we added mailings to all county Soil and Water Conservation Districts, and in 2011 we asked NWTF chapter around the state to assist as well. This increased the number of cooperators receiving the Brood Surveys to 2400. We provide a separate color-coded card for each month during the survey period of June-August, and included a more detailed instruction sheet for the surveys, including an illustrated example card. We are also working to improve and standardize our brood survey and hunter observation reports (see attached).

Brood surveys for this year (2012) have been completed, resulting in a poult/hen index of 2.03. This is down slightly from an index of 2.19 in 2011 and the previous 10-year mean of 2.35. There were many field reports of early broods this year, and comments received on the survey cards indicated that early planting of field crops may have reduced brood visibility.

SEASON CHANGES

Six additional counties were added to the fall firearm season this year. Participation in fall firearm turkey hunting has shown a decline in participation since 2006. The six new counties, chosen on the basis of available habitat and turkey sighting reports from our deer hunters, are: a remaining portion of Gallatin/Hardin that was previously closed, Edwards, Massac, Pulaski, Wabash, and Warren.

Hunters Bag 15,941 Birds During 2012 Illinois Spring Wild Turkey Season

Excellent weather through much of the season contributed to improved harvest

Hunters in Illinois harvested a preliminary statewide total of 15,941 wild turkeys during the 2012 Spring Turkey Season. The 2012 total compares with the statewide turkey harvest of 15,121 in 2011. Hunters took a state-record 16,605 turkeys during the spring season in 2006.

Hunters this spring took a preliminary total of 7,006 wild turkeys during all seasons in the South Zone, an increase from the harvest of 6,469 last year in the south. The North Zone total of 8,935 wild turkeys compares with last year’s total of 8,652 in the north. During the 2006 record year, harvests were 6,530 in the south and 10,075 in the north. All results include harvest during the Youth Turkey seasons.

“Excellent hunting weather made for a strong start to the 2012 season, with a preliminary record of 1300 wild turkeys harvested during the youth season,” said Paul Brewer, Illinois Department of Natural Resources Wild Turkey Project Manager. High early season harvest and progression into the later part of the wild turkey breeding season contributed to harvest declines in the later part of the season.

“We are hopeful that the excellent spring weather this year will help turkeys rebound in some areas where populations have declined somewhat,” said Brewer. “The long term key in improving wild turkey populations will be habitat management, particularly for nesting and brood rearing habitat.”

The 2012 Spring Turkey seasons were April 9 - May 10 for the South Zone and April 16 – May 17 for the North Zone. Youth Spring Turkey Seasons were March 31 – April 1 in the South Zone and April 7-8 in the North Zone.

The top five counties for wild turkey harvest in the South Zone were Jefferson (468), Wayne (452), Pope (380), Randolph (332), and Marion (331). Top five North Zone counties this year were JoDaviess (638), Pike (452), Fulton (404), Adams (366), and Macoupin (314).

The table below includes the preliminary 2012 county-by-county spring turkey harvest results with comparable totals for 2011.

COUNTY	2011	2012
Adams	415	366
Alexander	125	119
Bond	157	154
Boone	63	75
Brown	264	242
Bureau	105	140
Calhoun	305	252
Carroll	179	222
Cass	261	246

COUNTY	2011	2012
Champaign	17	17
Christian	42	64
Clark	147	165
Clay	201	219
Clinton	98	114
Coles	26	49
Crawford	170	161
Cumberland	52	78
DeKalb	13	22
DeWitt	39	62
Edgar	90	120
Edwards	87	103
Effingham	95	103
Fayette	213	268
Franklin	200	234
Fulton	449	404
Gallatin	109	123
Greene	236	190
Grundy	44	47
Hamilton	204	207
Hancock	269	230
Hardin	153	154
Henderson	128	168
Henry	62	82
Iroquois	50	75
Jackson	287	323
Jasper	125	141
Jefferson	402	468
Jersey	213	203
JoDaviess	534	638
Johnson	269	261
Kankakee	37	39
Kendall	20	18
Knox	243	241
LaSalle	143	123
Lawrence	108	127
Lee	90	81
Livingston	21	24
Logan	31	35
Macon	26	33
Macoupin	343	314
Madison	243	280
Marion	298	331
Marshall	69	86

COUNTY	2011	2012
Mason	188	194
Massac	87	92
McDonough	119	119
McHenry	38	60
McLean	69	77
Menard	112	117
Mercer	178	209
Monroe	163	170
Montgomery	186	158
Morgan	158	185
Moultrie	21	24
Ogle	158	192
Peoria	192	155
Perry	216	226
Piatt	7	15
Pike	522	452
Pope	356	380
Pulaski	140	140
Putnam	42	52
Randolph	321	332
Richland	101	124
Rock Island	191	207
Saline	134	145
Sangamon	98	90
Schuyler	292	269
Scott	96	85
Shelby	70	96
St. Clair	149	135
Stark	4	6
Stephenson	169	216
Tazewell	64	63
Union	324	290
Vermilion	127	157
Wabash	28	54
Warren	69	65
Washington	153	157
Wayne	314	386
White	165	166
Whiteside	143	185
Will	60	64
Williamson	274	319
Winnebago	173	191
Woodford	80	81



Wild Turkey Brood Survey and Hunter Observation Report – 2012

Forest Wildlife Program, Illinois Department of Natural Resources
October 2012



General Information

Survey Procedure: 2,400 surveys were mailed to cooperating landowners, mail carriers, biologists, Conservation Police Officers, state park and wildlife area managers, National Wild Turkey Federation chapters, and Soil and Water Conservation District employees. Observers were asked to record sightings of hen turkeys and turkey broods for the months of June, July and August. 520 cards were returned in 2012 for a return rate of 21.7%. This compares to a return rate of 19.7% for 2011.

The Poult/Hen Index is calculated as follows:

$$\text{Poult/Hen Index} = \frac{\text{Total Number of Poults Reported}}{\text{Total Number of Hens Reported}}$$

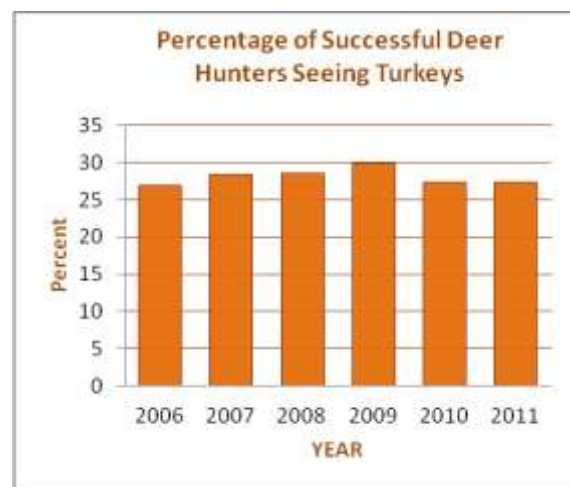
Successful deer hunters from all firearm and archery seasons were required to register their harvest on the same calendar day as the deer was taken. As part of the registration process, these hunters were asked to report the total number of wild turkeys observed during their hunt.

The Hunter Turkey Sighting Index is calculated as follows:

$$\% \text{ Hunters Seeing Turkeys} = \frac{\text{Total \# of Hunters Seeing Turkeys}}{\text{Total \# of Successful Hunters}} \times 100$$

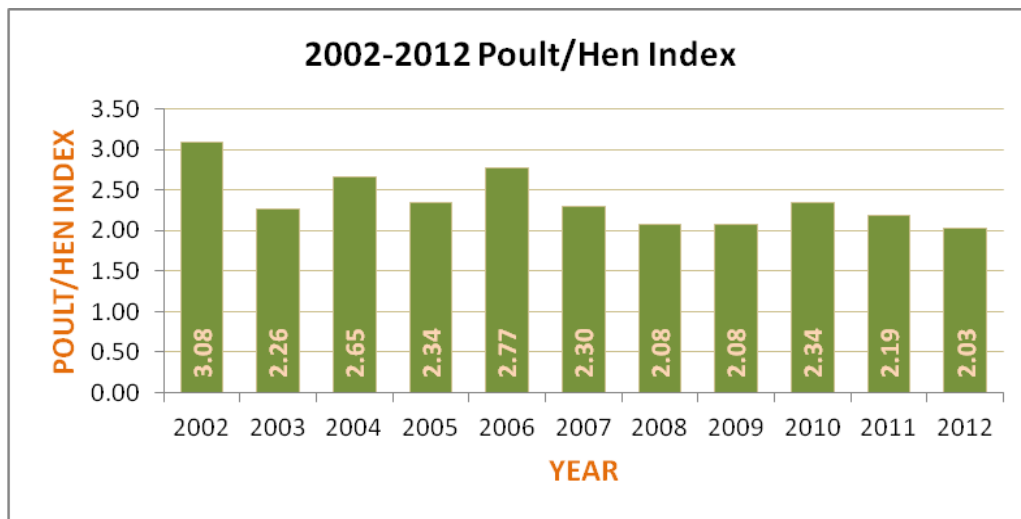
Significant Findings: The 2012 Statewide Poult/Hen Index of 2.03 was below the previous 10 year mean of 2.35 and is also slightly below the recent 5-year average of 2.19. The 2011 Deer Hunter Turkey Sighting Index of 27.43 is similar to the previous 5 year average of 27.69, and is almost identical to the sighting index of 27.44 observed in 2010.

YEAR	# Hens With/Without Broods	# Poults	Poults/Hen Index
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
2009	2,789	5,798	2.08
2010	2,129	4,975	2.34
2011	2,264	4,957	2.19
2012	2,658	5,387	2.03
Previous 10 Year Mean	18,907	44,393	2.35



2012 Poulth/Hen Index by Management Region

Region	Total Observations	Hens Observed	Poults Observed	Poult/Hen Index
1	84	721	1549	2.15
2	27	111	162	1.46
3	35	193	321	1.66
4	79	312	705	2.26
5	233	1321	2650	2.01
Totals	458	2658	5387	2.03



2011 Deer Hunter Wild Turkey Sighting Information (Combined Archery and Firearm)

Region	# Successful Hunters	# Hunters Observing Turkeys	# Total Turkeys Seen	Average # Turkeys Observed by Hunters Seeing Turkeys	% Successful Hunters Seeing Turkeys
1	43,929	11,164	213,263	19.10	25.41%
2	5,323	805	11,855	14.73	15.12%
3	20,504	4,073	66,035	16.21	19.86%
4	55,305	16,840	293,634	17.44	30.45%
5	56,390	16,887	353,095	20.91	29.95%
Statewide	181,451	49,769	937,882	18.84	27.43%

INDIANA WILD TURKEY STATUS REPORT

36th Annual Midwest Deer and Turkey Group Meeting
Custer State Park, South Dakota Department of Game, Fish, and Parks
October 16-19, 2012

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: <http://www.in.gov/dnr/fishwild/3352.htm>

WILD TURKEY 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 1.5 poults:hen (PI) observed was substantially lower than the 2.5 PI of the 5 prior summers (2006 -2010) and was the lowest production index since the survey began in 1993 (**Figure 1**). The proportion of hens observed with poults was 60%, also lowest percentage since 1993. The 2011 production was the 7th consecutive year below the long term average trend and the 2004 record high production. The general decreasing log trend (1993-2011) in the annual summer production of wild turkeys is indicative of a population whose growth rate has leveled off to "maintenance" or stable population level, but the rate of decline the last 3 years is of concern. Above normal precipitation during 6 of the last 7 Junes has likely influenced the downward trend. The proportion of jakes in the subsequent spring harvests has dropped significantly to below 20% the last 2 spring seasons.

Preliminary data compilations indicate that 2012 production may have increased slightly during the record drought this summer.

Roadside Gobbling Counts

Roadside gobbler trend routes (10 routes; 14 counties; 15 stops/route) are conducted annually (late March to April) in conjunction with roadside trend routes for ruffed grouse. The number of male wild turkeys heard gobbling along the traditional 10 control roadside routes during March 29 through 27 April 2014 was 0.86 gobblers heard per stop, a 16% increase compared to the gobbling index of 0.74 in 2011. Four new routes were re-established to expand the statewide coverage though data will not be included in the statewide analysis for 3 years. The long-term trend, based on a 5-yr moving average, shows a general increase from 1987-2006, followed by a general decrease since the 2006 peak (**Figure 2**). The 16% increase was not significantly different ($P > 0.05$) from the previous 5-yr mean of 0.86 gobblers heard per stop.

WILD TURKEY HARVESTS

2011 Fall Season Results

Hunters harvested 549 wild turkeys during the seventh fall turkey hunting season (**Figure 3**). The 2011 fall harvest was 27% less than the 751 birds taken in the 2010. The 66 days of the two archery-only portions of the season accounted for 32% of the harvest with 68% during the 5-12 days of the combined shotgun and archery portion. Shotgun hunters accounted for 55% of the harvest. Weekends accounted for 50% of the total harvest with 32% during the 1-2 weekends of the combined archery and shotgun portions. Juvenile birds made up 19% of the harvest with a juvenile to adult ratio of 1:4.2. The high adult proportion (81%) was probably related to a combination below average brood production in 2011, hunter selection for larger adult birds, and age determination errors. Counties harvesting at least 20 birds ($\geq 4\%$ of harvest total) were Switzerland, Harrison, Franklin, Jefferson, and Warrick. The proportion of the fall to spring harvest by county

ranged from 0% to 25% and the statewide fall to spring harvest proportion was 5% due to the conservative season structure and relatively low hunter interest. Below normal brood production and low hunter interest likely influenced the fall 2011 turkey harvest (**Table 1**). 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 (open permits/over-the-counter).

2012 Spring Season Results

Harvest data was collected at 400 volunteer check stations and from the roughly 2,200 reports submitted on newly implemented web-based “Check-IN-Game” harvest reporting system. Hunters harvested 12,655 wild turkeys in 89 of the 92 counties. The 2012 harvest was an 8% increase over the 2011 harvest. Estimated hunter success was around 22%. The majority of the birds were harvested in the early part of the season and the early morning hours. A total of 1,597 birds (13% of total harvest) was taken during the youth-only weekend prior to the regular season. The proportion of juvenile turkeys in the harvest was 14% with 52% 2-yr-olds, and 34% ≥ 3 yr-olds. The proportion of juveniles was especially low in the southern half of the state where inclement wet weather likely reduced the 2011 brood production. South-central and southeastern regions supported 47% of the harvest followed by northern Indiana at 24% (Figure 4).

The 2012 spring harvest was the 4th highest harvest of record and the 8% increase in 2012 harvest was likely related to a rebound from the poor hunter success experienced in 2011 when inclement weather and extensive flooding adversely impacted spring turkey hunter success throughout the Midwest and surrounding states. The estimated number of participating hunters was 56,144 with an estimated hunter success of 23%. The general growth in the spring harvests began to level off over the last decade and only recently, has hunter growth appeared to have level off (**Figure 5**). Indiana has an open, over the counter permit system with a 1 bird/hunter/spring season irrespective of equipment used.

A Wild Turkey Hunter Questionnaire Survey, last conducted in 2007, was sent to a random sample of 10,000 permit holders stratified by various permit types (youth to lifetimers, apprentice types, regular permittees, residents and non-residents) immediately following the 2012 spring turkey season to better estimate hunter effort and success for the spring and previous fall turkey seasons (Figure 6). The 2012 survey was designed for data entry by optical scanner (Scantron) but currently we are experiencing error reading issues with surveys filled out in blue and some types of black ink. Hopefully analysis will be underway soon.

Crop or Nuisance Issues

Crop depredation complaints in row crops continue to diminish each year, with no complaints in the 2012 drought summer. 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 be 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. The issue of spring season dates was most contentious in 2012, with one of the earliest springs of record in recorded temperatures and crop planting completion dates that were at least 4 weeks ahead of the normal times. Turkey poults were also observed in a couple areas the last week of the spring season, likely early hatches that normally don’t survive 24 hours in most years. The usual peak hatch appeared to be around Memorial Day weekend. The traditional source of complaints were earlier starting dates in nearby states, prevailing climatic and phenological conditions in March/April, gobblers displaying along roadways, and too many hunters watching cablevision turkey hunt shows. Interest in a 2 bird bag in the spring has dropped off considerably with 7 years of poor production except for some hunters hunting lands of restricted hunter access (e.g., leased lands).

Disease Monitoring Test Case – Coronavirus Follow up testing in 2011.

A couple of weeks prior to the 2010 spring turkey season, we received communications from a veterinarian with a commercial poultry company in southern Indiana that had an outbreak of coronavirus resulting in the depopulation of several of their facilities. In cooperation with Purdue University’s Avian Disease Diagnostic Lab, the commercial facility,

and USDA-APHIS Wildlife Services, we implemented a testing protocol a testing protocol to collect blood and organ samples from spring harvested turkeys.

The sampling was expanded slightly in 2011 to include samples submitted by agency biologists from their personal hunts and a few cooperating hunters from across the state. The samples were again tested for several pathogens of concern to the poultry industry (*Mycoplasma* spp., avian influenza, New Castle’s Disease, and *Salmonella pullorum*). These are the same tests we cooperatively made back in the mid-1980’s, when state wild turkey restoration programs across much of the US were heavily scrutinized by the USDA and the poultry industry. Throughout our restoration effort, no positive samples were detected in our source populations (In-State and Out-of-State), gaining us a “disease free” status. The unexpected preliminary results of our 2011 testing were that we had a scattering of positive ‘exposure” results from around the state for several of the selected pathogens but not necessarily indicating active infections. The results raise several questions regarding, “How were the disease free sources environmentally exposed post restoration to these pathogens across the state?” Another potential question pertains to whether the positive exposure is the result of a natural population maturation process where various mortality or welfare factors come into play influencing such things as reduce production. Of course the logical corollary to the second question, “Is why didn’t the restoration sources show some positive exposure as well.” We plan to do some more testing in 2012 and are currently scrutinizing aspects of the testing regiments for possible sources of errors (i.e., false positives).

Figure 1. Wild Turkey Production - Indiana

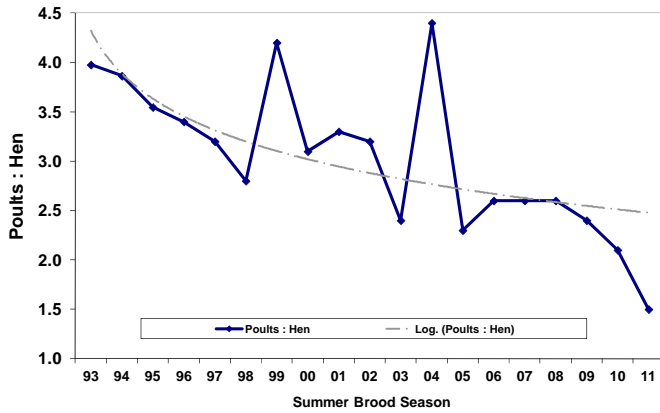


Figure 2. Roadside Gobbling Indices

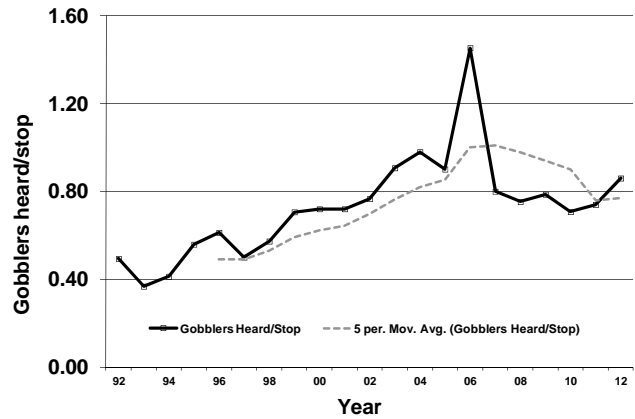


Figure 3. 2011 Fall Turkey Harvest

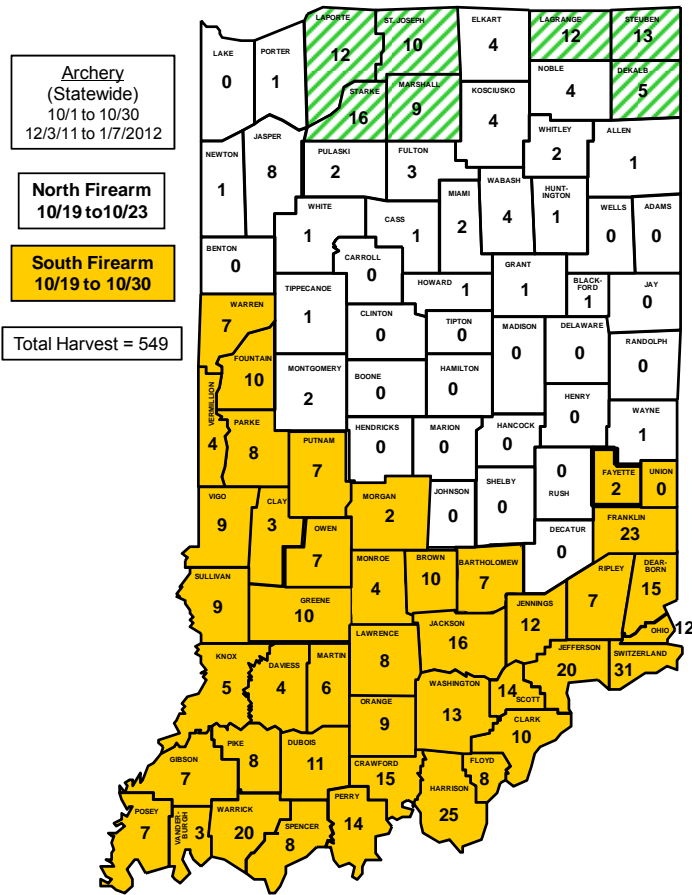


Figure 4. 2012 Spring wild turkey harvest and age structure by region

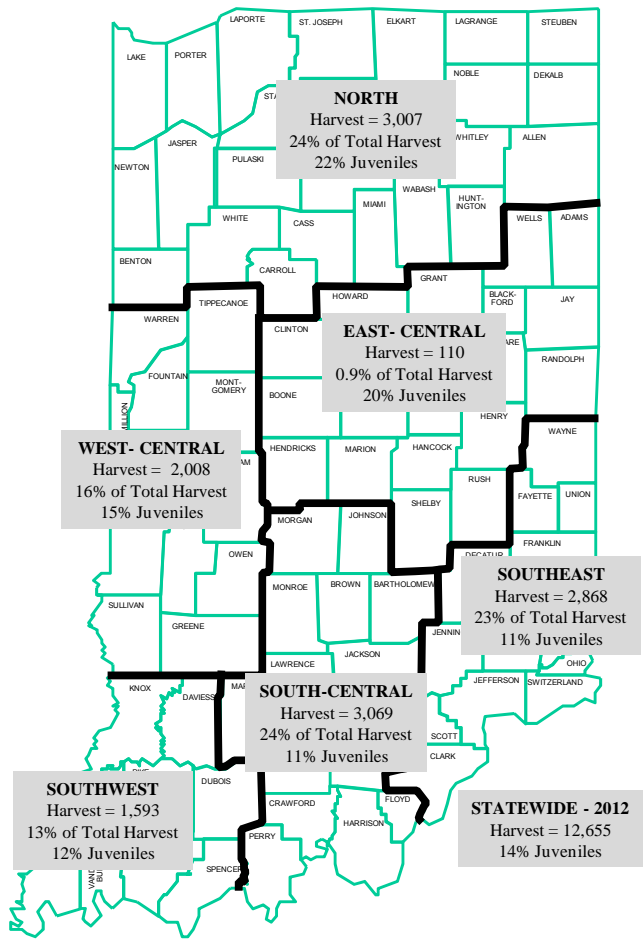


Table 1. Indiana Fall Wild Turkey Season Summary 2005 to 2011.

	YEAR						
	2005	2006	2007	2008	2009	2010	2011
Annual Harvest	716	646	585	610	773	751	549
Counties Open to Archery Hunting Only	60	74	74	74	74	92 (ALL)	92
Days of Archery Only	18	17	16	14	20	61	65
Counties Open to Shotgun and Archery	26	26	26	34	34	43S/7N	43S/7N
Days of Combined Shotgun and Archery	5	5	5	5	5	12S/5N	12S/5N
Statewide Fall/Spring Ratio in %	6%	5%	5%	5%	6%	6%	5
County F:S Ratios (range of values)*	0-15%	0-17%	0-18%	0-11%	0-17%	0-12%	0-25%
No. Resident Fall Licenses Sold	2,225	1,682	1,557	1,689	2,054	2,591	2,476
Estimate of Fall Turkey Hunters**	11,787	7,455	7,312	7,493	7,955	8,980	8,887
Estimate of Fall Hunting Success	6%	9%	8%	8%	10%	8%	6%

* High side of range related to counties with low spring harvests e.g., 1 fall/4 spring

** Estimate based on rough extrapolation of participation rates of approximately 43,000+ lifetimers, 38,000+ youth hunters, <30 nonresidents, and an undetermined but license exempt landowners/active military.

Figure 5. Indiana Spring Turkey Seasons

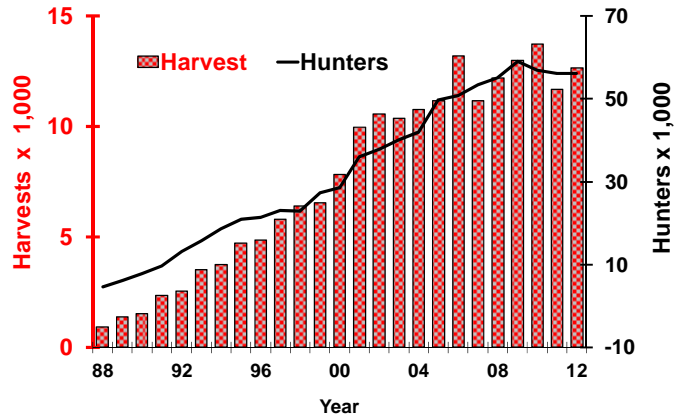


Table 2. Indiana's spring wild turkey hunting seasons, 1970 to 2012.

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	73,089	56,891	13,742	24%
2011	4/27-5/15	19	92	72,323	56,220	11,669	21%
2012	4/25-5/13	19	92	71,836	56,144	12,655	23%
2013	4/24-5/12	19	92				

* Includes all allowable license types (e.g., lifetime, youth licenses sold by May, non-residents, and apprentice).

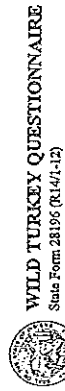
** No. of hunters includes those permit holders who hunted ≥ 1 day and since 1986, the number of hunters includes an estimate of license exempt landowners or military hunters on active leave participating in the spring season.

[†] "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

Figure 6.



Survey Number WHS 00790

Periodically a sample of hunters is surveyed to gather information on their turkey hunting effort and success in Indiana. Please answer the questions below as completely and accurately as you can. After completing the survey, please return it in the postage-paid envelope. Thank you for your cooperation.

Please answer questions by filling in the appropriate bubble with a pencil or a blue or black ball-point pen.

CORRECT ⊗ INCORRECT: ✗ or ✓

- 1. Did you hunt wild turkey in Indiana this spring?
2. Did you kill a wild turkey in Indiana this spring?
3. For youth hunters only, did you hunt during the youth-only weekend?
4. Number of days you hunted during the regular 19-day season?
5. On average, how many hours do you hunt wild turkeys each day that you hunt?

Use the County Code Table for answering questions 6 and 7

Table with 4 columns: County Code, County Name, County Code, County Name. Lists all 92 Indiana counties.

7. In what Indiana counties did you hunt wild turkeys this spring?

Form for questions 6 and 7, including county code selection boxes and 'No. of Days Hunted' fields.

Form for question 8: Number of days you hunted on land owned or administered by: Hoosier National Forest, State Forest, IDNR, etc.

- 9. Which ONE statement best describes your hunting efforts during a typical spring turkey season?
10. Based on your observations in the primary county you hunted, wild turkey populations are (select one):
11. How would you rate your spring turkey hunting season?
12. Did you hunt wild turkeys during the previous Fall turkey season?
13. What portions of the Fall turkey season did you hunt?
14. Which statement below best describes your fall turkey hunting strategy?

Questions about acquiring access to PRIVATE lands to hunt wild turkeys

15. Please choose the ONE statement that best reflects your opinion about obtaining access to PRIVATE land for turkey hunting in Indiana.

16. Please choose ONE statement that best reflects how often you approach landowners for permission to hunt.

Thank you for cooperation, please return in the postage paid envelope.

IOWA WILD TURKEY STATUS REPORT

Midwest Deer and Turkey Study Group Meeting Custer State Park, SD, October 16-19, 2012

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:

<i>Gun/bow combo licenses</i>	Licenses issued ^a	Harvest totals ^a	Hunter numbers ^a (> 1 license/hunter)	Success rates (per lic.)	Season dates	License fees
Resident Fall 2011	6,259 (-4%)	706 (-13%)	5,761 (-4%)	10%	10 Oct - 2 Dec	Hunting fee: \$19.00 Habitat fee: \$13.00 Turkey lic. fee: \$24.50 Total fees: \$57.50
Youth Season (< 16) Spring 2012	3,450 (+30%)	1,079 (+81%)	One license/youth	31%	7 Apr - 15 Apr	Hunting fee: \$112.00 Habitat fee: \$13.00 Turkey lic. fee: \$102.00 Total fees: \$227.00
Resident - Spring 2012	37,995 (-6%)	8,906 (+10%)	29,857 (-7%)	22%	16 Apr - 19 Apr 20 Apr - 24 Apr	
Nonresident Spring 2011	1,877 (+1%) (86% available sold)	749 (+12%)	One license/ non-resident	40%	25 Apr - 1 May 2 May - 20 May	Hunting fee: \$19.00 Habitat fee: \$13.00 Turkey lic. fee: \$24.50 Total fees: \$57.50
<i>Bow only Licenses</i>						
Resident Fall 2011	1,913 (-2%)	112 (+13%)	1,859 (-2%)	6%	1 Oct - 2 Dec 19 Dec - 10 Jan	Hunting fee: \$19.00 Habitat fee: \$13.00 Turkey lic. fee: \$24.50 Total fees: \$57.50
Resident - Spring 2012	5,287 (-13%)	802 (-3%)	4,932 (-12%)	15%	16 Apr - 20 May	
<i>Totals</i>						
Fall 2011	8,492 (-4%)	802 (-3%)	7,620 (-4%)	9.5%		
Spring 2011	45,159 (-7%)	10,457 (+10%)	31,734 (-15%)	---		

^a parentheses indicates percent change from previous year

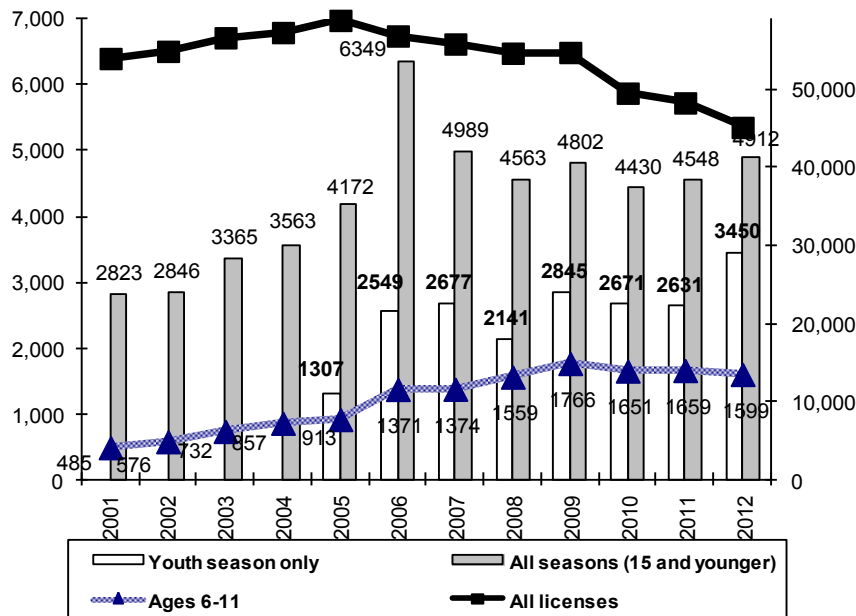


Figure 1. Iowa spring turkey license issue by age, 2001-2012.

YOUTH TURKEY HUNTING

Iowa's 8th youth spring turkey season has held in April 7-15, 2012. During the 9 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 3,450 youth purchased licenses for the season (Fig. 1). Youth season license sales increased (819 more licenses sold) in 2012.

Since the inception of ELSI (Electronic Licensing System of Iowa) in 2001, hunter age and gender has been recorded (Fig. 2.8). From 2001-2006, youth spring turkey hunters (age 15 and under) increased each year. After the first youth season in 2006, youth licenses have varied slightly, but overall have remained similar. The total number of licenses sold has decreased each year since 2005 with a slight increase in 2009, and a decrease in 2010-12 (Fig. 1).

BOWHUNTER SURVEY

Wild Turkey Observations Per 1,000 Hours Hunted Bowhunter Observation Survey, Iowa Dept. of Natural Resources

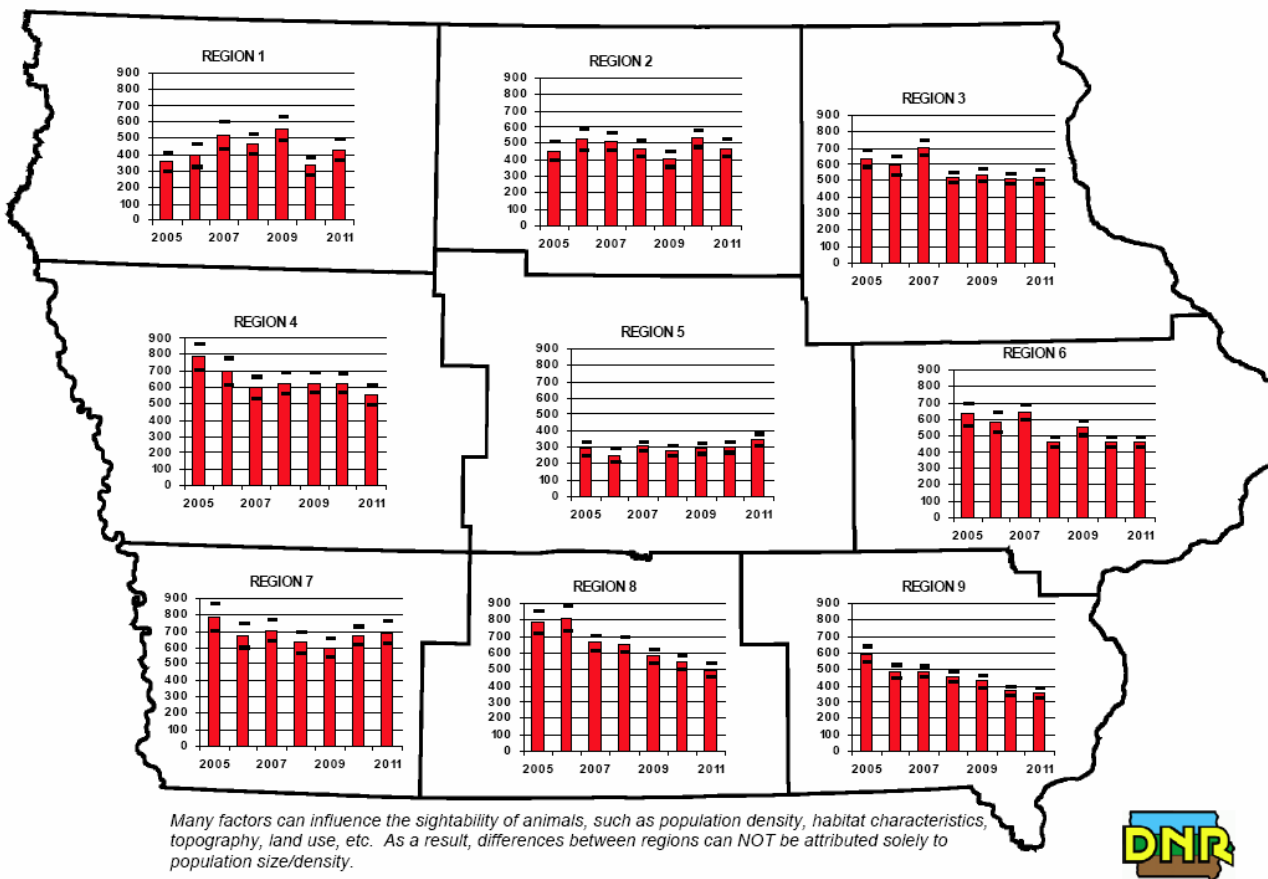


Figure 2. Bowhunter observation survey, wild turkey observations per 1,000 hrs, 2005-2011.

2011 Bowhunter Observation Survey Iowa Department of Natural Resources

Peter A. Fritzell, Jr., Human Dimensions Specialist, 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 2, 2011. This was the eighth 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 2011 survey were selected from a list of bowhunters who had purchased a license for each of the 3 years prior to 2011 (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 2,045 bowhunters who recorded their observations during 30,024 hunting trips, yielding 103,087.5 hours of total observation time (3.43 ± 0.02 hours/trip; mean \pm 95% CL). Bowhunters reported a median of 14 trips during the 63-day season. Regionally, the number of bow hunting trips (and hours hunted) ranged from 1,750 (5601.5 hours) in northwest Iowa (Region 1) to 4832 (16,785.5 hours) in east-central Iowa (Region 6). The raw survey response rate was 22.7%.

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 $\pm 15\%$ 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 2010 and 2011 indicated that the number of total deer observed/1,000 hours declined significantly in the northeast, west-central, and east-central regions (3, 4, 6) of Iowa. No significant change in total deer observations/1,000 hours was detected in any other region. The number of wild turkeys observed/1,000 hours was unchanged in all regions compared to 2010. There were no year-to-year significant differences in bobcat nor river otter observations/1,000 hours regardless of region in 2011. Observations of opossums per 1,000 hours significantly increased in 2011 in the central and south-central regions of Iowa (regions 5 and 8). Raccoon observations/1,000 hours were unchanged in all regions except the east-central and southeast (regions 6 and 9), where observations/1,000 hours declined.

The DNR thanks all hunters who participated in the 2011 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

2011 Summer Turkey Survey

Statewide

	2010	2011	Change
S hens	54.7%	50.6%	-7.5%
Poults/Hens	2.0	1.8	-10.0%
# of Obs	3617	3444	

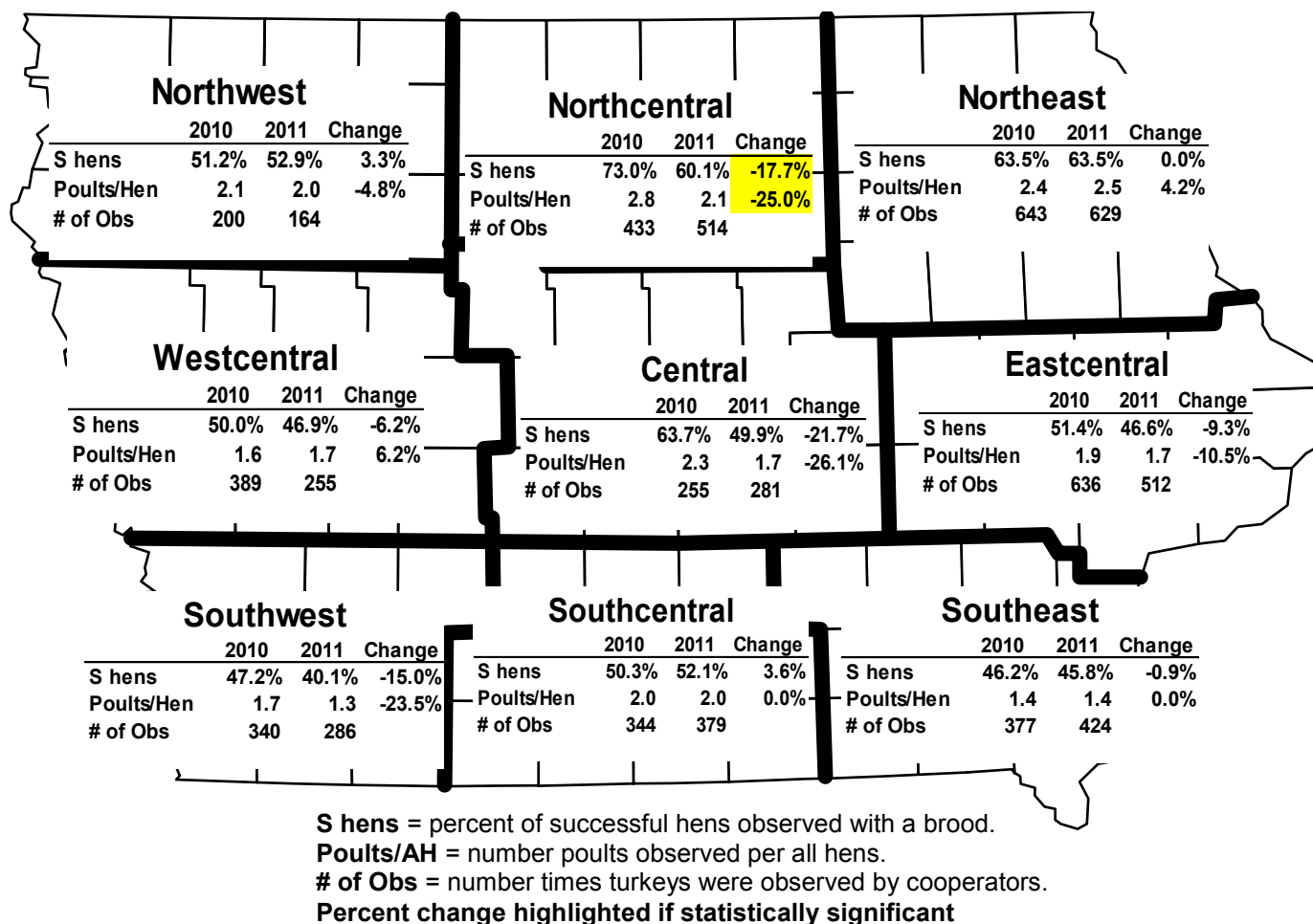


Figure 3. Iowa turkey brood survey statewide results, 2010 & 2011.

Results from Iowa's 2011 summer wild turkey survey indicated minimal change statewide from the previous year in turkey reproduction. Even though the trend indicated a slight decrease in reproduction, it was not statistically different. Statewide, the number of hens observed with a brood decreased by 7 1/2 %, the number of poults observed per hen decreased by 10%. Regionally, north central, central, and southwest Iowa experienced the highest decreases in turkey reproduction, but north central Iowa was the only region in which these decreases were statistically significant. All other regions experienced similar reproduction as the previous year. The 2011 survey suggests that wild turkey reproduction was similar relative to 2010, despite the above normal April-June rainfall (up to 200% above normal in parts of Iowa) that coincided with Iowa's nesting and hatching period ([http://www.ncdc.noaa.gov/temp-and-precip/maps.php?year=2011&month=6&ts=3&imgs\[\]=hprcc-mp&submitted=true#maps](http://www.ncdc.noaa.gov/temp-and-precip/maps.php?year=2011&month=6&ts=3&imgs[]=hprcc-mp&submitted=true#maps)). During the previous year (2010), rainfall ranged from 200-400% above

normal, resulting in similar turkey reproduction.

Several small sized poults were reported by survey cooperators in late August, indicating late hatches from hens reneating later in the season after their nests had been lost (possibly due to the wet weather during May and June). The bowhunter survey has recorded declines in turkey numbers in southern Iowa over the past several years, which is expected with several repeated years of above normal spring rainfall and reduced turkey reproduction.

FALL 2011 HARVEST SURVEY

Fall hunting was allowed in the entire state in 2010, which was the 6th consecutive year (Fig. 4). Fall turkey hunter success rates remained the same in 2011 from 2010 (Fig. 7), but still well below the 2005 and prior estimates due to the change in harvest estimation. 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.

Shotgun/bow licen
 season that ran from 10 Oc
 issued free to landowners.
 from 1 October through 21
 success rates varied from 1
 reported a harvest of 112 to
 5.9% success rate for 2010
 archery-only hunters. Non

... 2010 to 8,172 for the 54-day
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1

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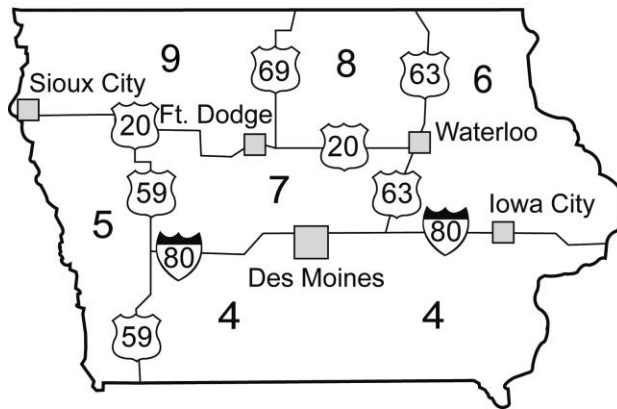


Figure 4. Fall turkey hunting zones in Iowa, 2011.

1981

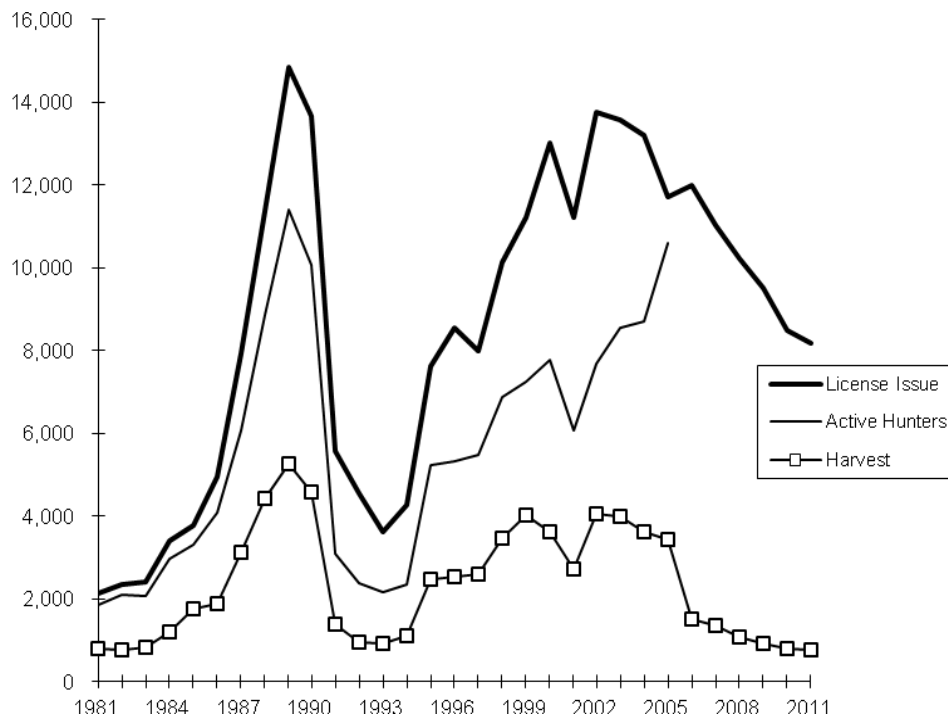


Figure 5. Iowa fall turkey hunting statewide estimates, 1981-2011

SPRING 2011 HARVEST SURVEY

Iowa's 39th modern spring hunting season recorded an estimated 10,457 turkeys harvested, with 45,159 licenses sold (Fig. 6). This was the 24th year the entire state was open to spring turkey hunting. The 44-day season (7 April through 20 May, 2012) was partitioned into 5 separate seasons: a 9-day youth-only season, and 4 regular seasons (4, 5, 7, and 19-day seasons). An increase in the number (3,450) of licenses were sold for the youth-only season with 819 more youth licenses sold (Fig. 1). The 4-season format, with unlimited license quota an unlimited license quota for all the periods, resulted in 37,995 resident shotgun licenses issued. An additional 5,287 archery-only licenses were issued. Archery-only licenses harvested 802 turkeys, resulting in a 15.2% success rate in 2012.

Twenty-two percent of the resident hunters were successful in harvesting a gobbler in 2012 (Fig. 7). 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). Declines observed in spring hunter success rates during 1983 and 1984 (Fig. 7) can be partially explained by poor brood production during the summers of 1982 (Fig. 7). Similarly, the decline in hunter success rates between 1988 and 1993 may be explained by 6 years of poor brood production starting in 1988. 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 23rd spring that non-residents were allowed to hunt turkeys in Iowa. Quotas filled in zone 4 (seasons 2-4), zone 5 (seasons 2-4), and Zone 8 (seasons 2 & 4) in 2012, leaving 346 licenses available. Non-resident hunters harvested 749 wild turkeys. Non-residents were more successful than residents in harvesting a spring gobbler (22% versus 40%, respectively).

In spring of 2012, known jakes (spurs < 1/2") harvested were 16% of the total harvest (18% the previous year). Turkeys harvested with spurs 1/2" – 3/4" were 24% (24% in 2010) of the total harvest in 2009. The majority (60%) of turkeys harvested had spurs > 3/4".

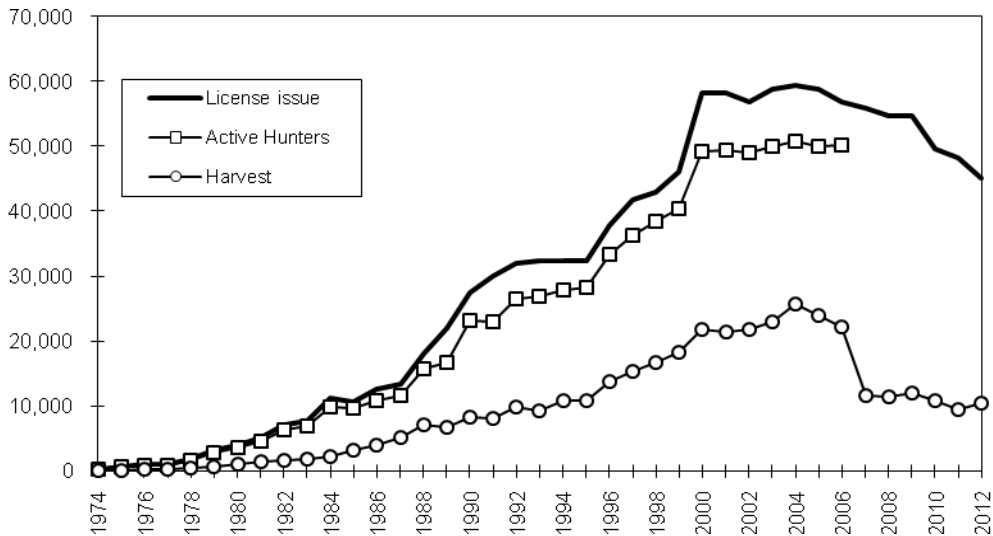


Figure 6. Iowa spring turkey hunting statewide estimates, 1974-2012. Beginning in 2007, the harvest estimates are based on mandatory harvest reporting instead of mail surveys.

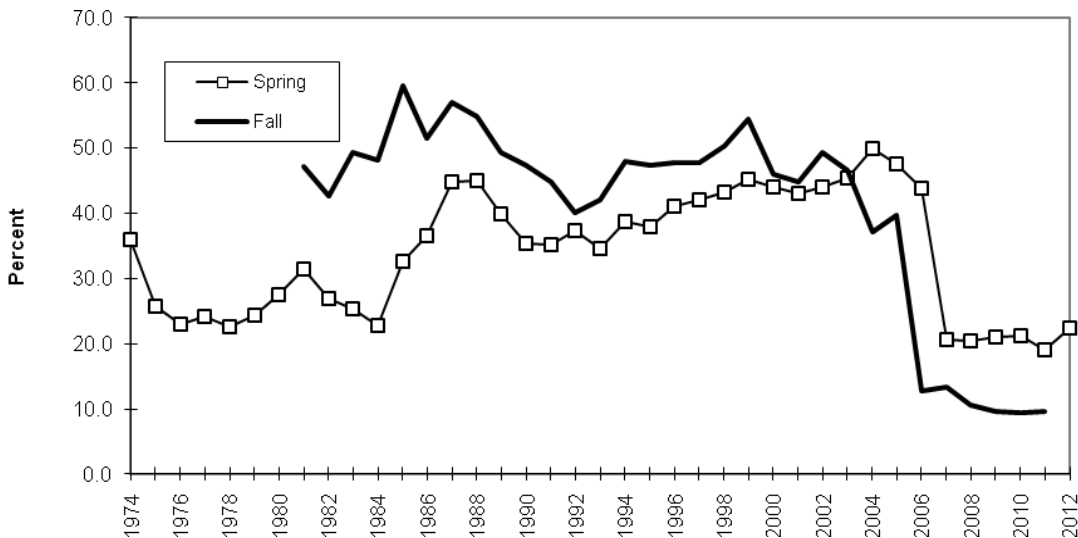


Figure 7. Iowa fall and spring turkey harvest statewide success rates, 1974-2012. Beginning in 2006, survey estimates are based on mandatory harvest reporting instead of mail surveys.

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 (Fig. 8).

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.

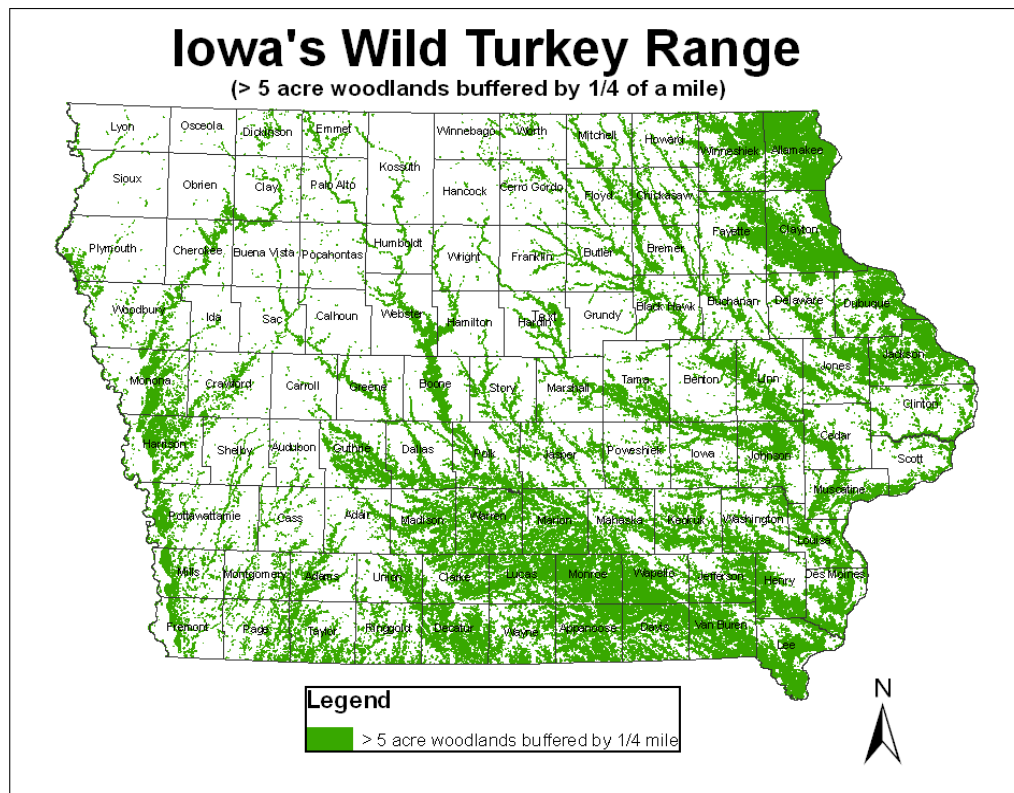


Figure 8. Iowa's wild turkey range (5 acre and greater woodlands buffered by 1/4 mile).

KANSAS WILD TURKEY UPDATE
MIDWEST DEER & WILD TURKEY STUDY GROUP
CUSTER, SOUTH DAKOTA
OCTOBER 16-19, 2012

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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 generally stable or gradually increasing.

The Kansas Department of Wildlife, Parks, & Tourism (KDWPT) estimates wild turkey productivity using data collected primarily during the summer RMCS. Since 1987, the carriers have been asked not only to record the number of turkeys observed but to differentiate between young and adults. The department uses the ratio of young:adult as an index to productivity. The RMCS young:adult ratio indicated that statewide production was 52.2% above the previous 10-year average during 2012 and 150.4% better than the previous year. The indices indicate that production was above the 10-year average in every region of the state which was most likely due to dry conditions during the period of peak hatching and early brood rearing (Figure 3).

Employees of the KDWPT also record observations of pheasant, bobwhite, and turkey broods from the 3rd week of July through the 4th week of August. Turkey observations were not recorded until 2006 and the survey protocol changed in 2012 to a more standardized design. Thus, these data do not yet provide a long-term series of consistently collected poult:hen ratio from which trends can be assessed. However, the new protocol that was adopted in 2012 for this survey will improve our ability to assess trends in productivity in future years. The 2012 poult:hen ratios from the newly designed survey were >1.5 in all but the Southwest region where

no broods were observed. The highest poult:hen ratios were recorded in the Southcentral (3.6) and Southeast (2.6) management regions.

Harvest 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 may 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 2011 turkey season was open for 98 days across 3 segments (Table 1). Hunters pursuing turkeys in Unit 2 (Figure 3) 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. The 2012 spring turkey season ran for 61 days (including the special seasons) and permits were available over-the-counter for Units 1, 2, and 3. Only 500 spring permits were available to general residents and landowners for Unit 4 (southwest KS) through a pre-season drawing. Any youth (<16) could purchase an over-the-counter permit valid for any unit in the state (including Unit 4). All spring hunters had the option to purchase a second permit called a game tag which was valid only in Unit 2 or 3. Additionally, all hunters (resident and non-resident) had the opportunity to purchase a combination license prior to March 31 that contained both spring carcass tags. These combination licenses were sold at a \$7.50 discount over buying both permits individually.

Estimation of Hunter Activity and Harvest

The KDWPT estimates turkey hunter activity and harvest through post-season online questionnaires sent to a stratified sample of hunters that equates to 20% of the people that purchased each permit type. The selected individuals are drawn from the group of people that provide the department with their e-mail address when purchasing a license (35-40% of total permit holders). The selected individuals are sent an e-mail with a link directing them to an online questionnaire. About one week after the first notification a second e-mail is sent to those individuals who have not yet responded. A third e-mail blast is sent to non-respondents about 2 weeks after the second attempt. To increase response rate, all respondents are entered into a drawing for a framed turkey print and KDWPT magazine subscriptions.

Permit Sales and Harvest Estimates

The KDWPT currently sells spring turkey permits to >42,000 hunters and fall turkey permits to >10,000 hunters (Table 2). Non-residents account for 31.4% of Kansas' spring hunters and 21.7% of the fall hunters. Kansas turkey hunters purchase approximately 77,000 permits (~64,000 spring and 13,000 fall) annually and harvest about 37,000 birds (~33,000 spring and 4,000 fall; Table 1-2). The percentage of hunters harvesting at least one bird was 39% and 60% for the fall 2011 and spring 2012 seasons, respectively.

Recent Regulation Changes

The KDWPT commission recently approved a regulation that will allow anyone <16 and >55 to use a crossbow during all archery-only seasons (including the spring turkey archery season). In the past, only those people with a Doctor's note could legally hunt with a crossbow during an archery-only season. The new regulation took affect with the start of the fall 2012 seasons and will be in effect for all future deer and turkey archery-only seasons.

Also, the KDWPT commission approved new fall hunt unit boundaries at the April 2012 commission meeting (Figure 1). Those new boundaries were proposed so that hunt units and management units could be better aligned and they took affect with the start of the fall 2012-2013 season. The new boundaries will allow the department to adopt an adaptive harvest strategy that will utilize resident spring hunt success and the percentage of jakes in the spring harvest to trigger changes in regulations. The KDWPT commission will be voting on the same changes to the spring hunt boundaries at the October commission meeting. If adopted, the new hunt boundaries will be in effect for the spring 2013 season.

Access Programs

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 Access (WIHA) program. During the fall of 2011, 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 \$1.99/acre. The spring turkey WIHA program is still expanding in the state and enrollment for the spring 2012 season was >191,000 acres. Landowners enrolled in the spring WIHA program received an average of \$1.79/acre and allowed access to their property from 1 April – 31 May. For the 7th year, the state chapter of the National Wild Turkey Federation (NWTf) made a monetary contribution to the spring WIHA program from the state superfund. Through a sign-up incentive program in an area of the state where turkey populations are abundant but access growth was stagnant, their contribution of \$5,500 allowed for the enrollment of 11 new spring contracts. These contracts increased access in the four-county area by 2,783 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.

The KDWPT also leases 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 opened over 3,700 acres in twelve of the target counties to turkey hunting for spring 2012 which provided 83 available hunts.

In October of 2010, KDWPT was awarded additional federal grant dollars through the USDA Farm Service Agency (FSA) Voluntary Public Access and Habitat Incentive Program (VPA-HIP). This Farm Bill funded program allows for the enhancement of existing public access and habitat improvement on private lands that are made available to the public for hunting and fishing. The KDWPT was awarded an initial \$3 million with the potential for another \$1.5 million for a third year of funding. The primary focus for enhancing private lands access and habitat improvement through VPA-HIP funds will be to promote enrollment in Continuous CRP (CCRP) practices, specifically CP33 (Habitat Buffers for Upland Birds) and CP38 (State Acres For Wildlife Enhancement), bundling additional CCRP enrollment incentive payments (above and beyond those paid by USDA) with public hunting access agreements for the length of the CCRP contract. This approach will maximize the utility of VPA-HIP funds, help to insure appropriate wildlife habitat is in place for the duration of the hunting access agreement, and ensure that habitat improvements are compliant with all federal best management practices. The KDWPT began enrolling landowners in the program during late summer of 2011. Slightly more than 40,000 acres have now been enrolled with an average access lease length of 11.2 years. In addition to the increased enrollment in CCRP habitat programs on leased properties, VPA-HIP funds have also been used to complete immediate and long-term habitat improvement projects on existing WIHA properties. Projects have now been funded through this effort on >6,000 acres of existing access properties.

Translocation Efforts

For the most part, turkey stocking efforts have been completed in Kansas. However, the department still moves birds occasionally to address nuisance complaints. The departmental turkey committee develops a priority list for translocated turkeys each fall should birds need to be moved. For the winter of 2011-2012 the field staff identified 4 suitable sites for translocations but no trapping was conducted.

Research

No wild turkey research is currently in progress in Kansas.

Table 1. Kansas wild turkey season dates, total harvest, and hunter success, 2008-2013.

Year	Spring			Fall		
	Season Dates	Total Harvest	Success ^a (%)	Season Dates	Total Harvest	Success ^a (%)
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%) ^b	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)	3,954 (38%)	39
2011	Archery-only: Apr. 1-12 Youth/Disabled: Apr. 1-12 Regular: Apr. 13– May 31	32,298	61	Seg. 1: Oct. 1–Nov. 29 Seg. 2: Dec. 12-31 Seg. 3: Jan 9-31 (12)	3,677 (39%)	36
2012	Archery-only: Apr. 1-10 Youth/Disabled: Apr. 1-10 Regular: Apr. 11 – May 31	31,239	60	Seg. 1: Oct. 1– Nov. 27 Seg. 2: Dec. 10-31 Seg. 3: Jan 14-31 (13)	NA	NA
2013	Archery-only: Apr. 1-9 Youth/Disabled: Apr. 1-9 Regular: Apr. 10 – May 31	NA	NA	Not Set	NA	NA

^a Success was the percentage of active hunters harvesting ≥ 1 bird.

^b Percentage of harvest composed of females.

Table 2. Number of permits sold for Kansas’ fall and spring turkey seasons, 2011-2012.

Permit ^a	Fall (2011-2012)	Spring (2012)
Resident permit (\$22.50) ^b	5,361	14,398
Resident combo (\$27.50)	NA	4,090
Non-resident permit (\$32.50)	2,172	11,312
Non-resident combo (\$47.50)	NA	1,863
Landowner/tenant permit (\$12.50)	1,837	4,483
Landowner/tenant combo (\$17.50)	NA	1,093
Resident youth permit (\$12.50) ^{c,d}	655	3,401
Resident youth combo (\$17.50)	NA	1,124
Resident game tags (\$12.50)	2,341	6,608
Non-resident game tags (\$22.50)	548	7,162
Total Permits	12,914	63,928^e

^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 permits does not equal the sum of all the issuances because the combination permits include two carcass tags.

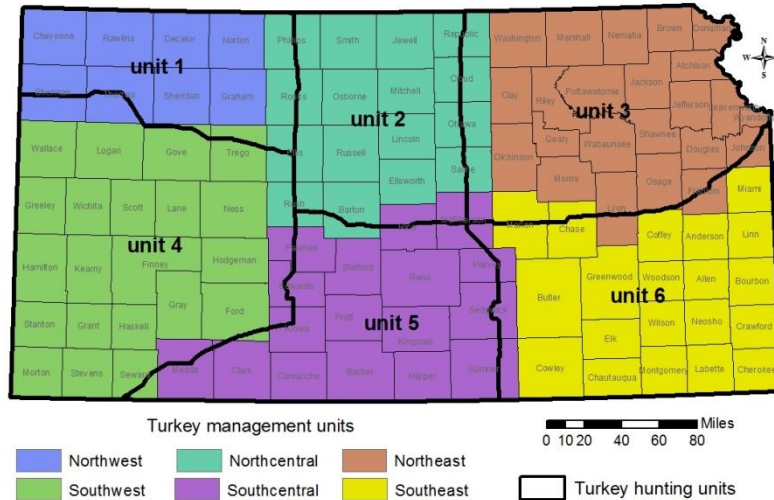


Figure 1. The 6 wild turkey management units and corresponding newly adopted hunting units that took effect for the fall 2012-2013 season. The new hunt units were created so that harvest could be managed at approximately the same scale at which survey data are collected. For the fall 2012-2013 season, hunters were allowed to buy an over-the-counter permit valid in Units 1, 2, 3, 5, and 6. Three additional permits known as game tags could also be purchased over-the-counter and were valid in Units 2, 3, 5, and 6. No fall turkey hunting was permitted in Unit 4.

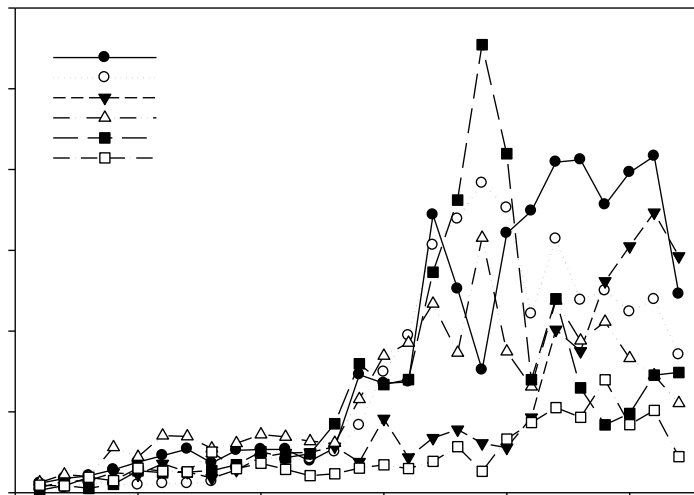


Figure 2. The spring rural mail carrier index (birds/100 mi. traveled) to wild turkey populations in the 6 Kansas management regions, 1986-2012.

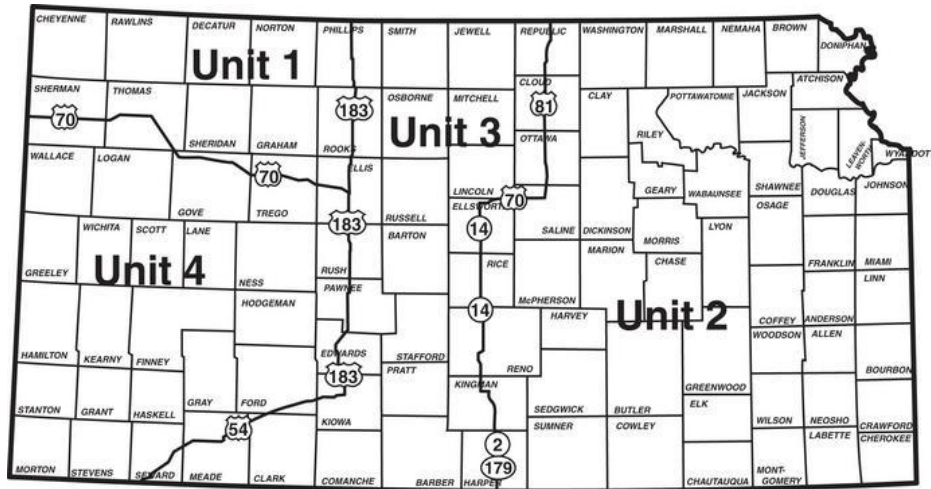


Figure 3. The map depicts the hunting units for Kansas’ spring 2012 turkey season. A permit valid in Units 1, 2, & 3 could be purchased over-the-counter. Five hundred permits were also issued to adults for Unit 4 through a pre-season drawing. Youth (≤ 16) could purchase an over-the-counter permit that was valid statewide. A second bird could be harvested in Units 2 & 3 with the purchase of an over-the-counter game tag.

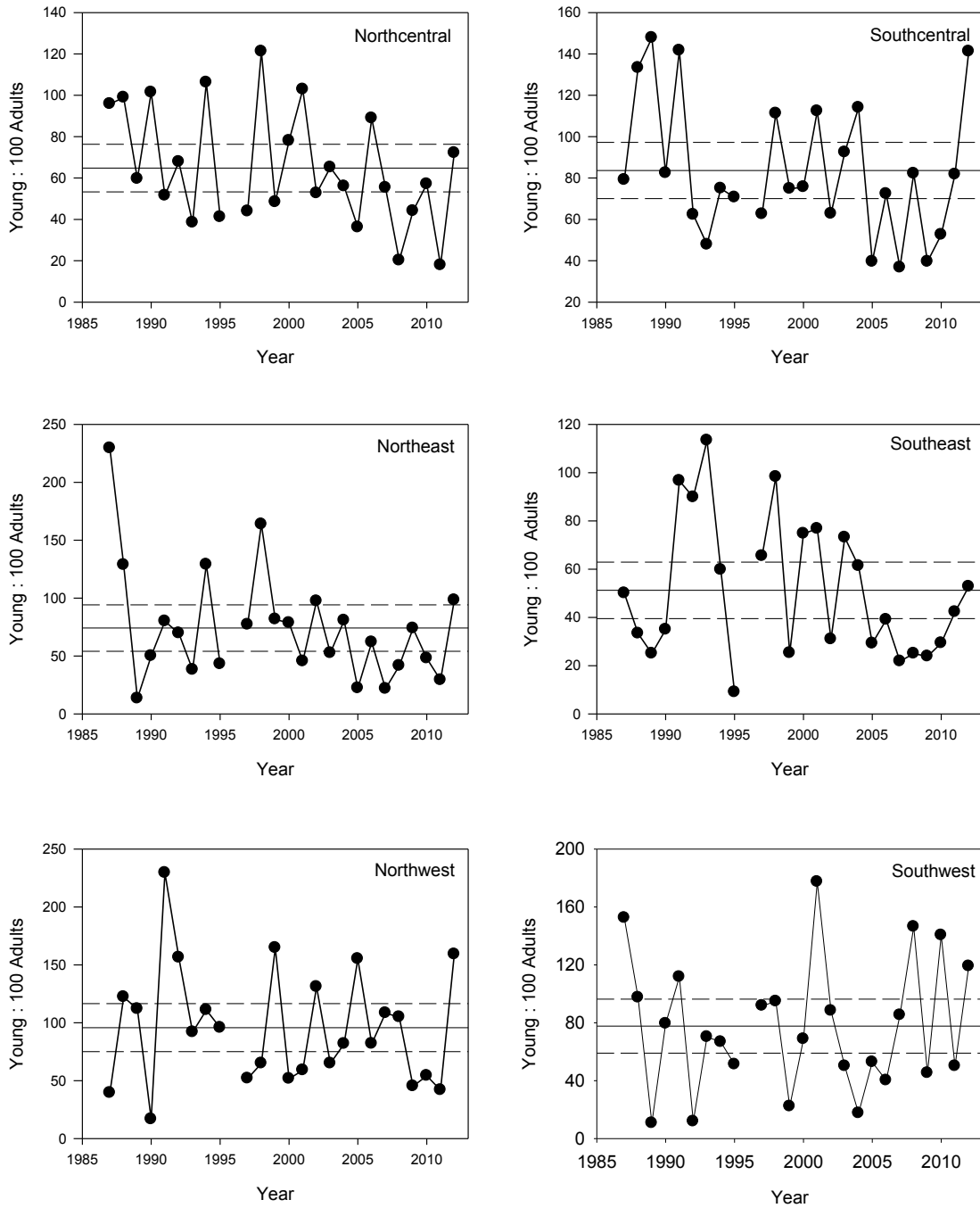


Figure 4. Wild turkey production indices (young : 100 adults) for the 6 Kansas turkey management regions, 1986-2012. The long-term mean production index is depicted as a solid line and the accompanying 95% confidence interval is shown by dashed lines.

2012 KENTUCKY WILD TURKEY STATUS REPORT

2012 Midwest Deer and Wild Turkey Study Group
Custer State Park, SD
October 16–19, 2012

Steven T. Dobe, Wild Turkey Program Coordinator
Kentucky Department of Fish and Wildlife Resources
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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 230,000 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 ($\frac{1}{4}$, $\frac{1}{2}$, Grown) also is recorded.

The statewide brood survey for 2010 concluded with 340 observations and broods being seen on 677 occasions; this was down 21.6% from 863 in 2010. Overall, 1,605 sightings of hens were recorded, indicating the proportion of hens with at least one poult was 42.2%; down considerably from the 2010 estimate of 59.4%. The average brood size of 3.4 poults in 2011 was lower than the 4.1 poults recorded in 2010. The average number of poults per all hens in 2011 was 1.4 (Figure 1).

Regionally, the western portion of the state appeared to exhibit the most reproductive success in 2011 with 1.6 poults per all hens (Figures 2 and 3). In 2011, estimates for the central and eastern regions of the state indicate approximately 1.4 and 1.2 poults per all hens, respectively. Collectively, 2011 marked the lowest estimate for reproductive output in Kentucky since brood surveys were initiated in 1984. It is suspected that last year's historic rain events during spring and early summer had significant impact on reproductive success, particularly for birds that nested earlier in the season.

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 in far western Kentucky.

PERMIT SALES

In the 2011–12 license year, 20,566 spring turkey permits were sold, down 4.1% from 21,447 the previous year. Sales from the 2011–12 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 2011–12 spring season increased to 75,222; this is up 1.5% from 74,106 in the previous year.

When fall hunting permits are incorporated into sales statistics, the overall number of permits sold during the 2011–12 season was 78,091, which up 1.0% from the 77,293 sold during the 2010–11 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 2012, the statewide spring season ran for 23 days from April 14 through May 6; the youth-only hunt occurred on the weekend of April 7–8. 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 2012 fall archery season for turkeys will occur September 1, 2012 to January 21, 2013. In 2012, a fall shotgun season occurs on October 27 to November 2 and December 1–7. A fall crossbow season for turkeys will run from October 1–21 and November 10 to 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 2012 spring turkey season resulted in the harvest of 33,067 birds over the 2-day youth-only and 23-day statewide seasons; this is up 2.7% from the 2011 when 32,191 were checked (Table 1 and Figure 5). This year’s youth-only harvest of 2,311 birds was up 25.8% from the previous year’s 2-day hunt; this is a new harvest record for Kentucky’s 2-day youth only season. Statewide, juvenile males accounted for 11.0% ($n = 3,616$) of this year’s spring

harvest. This spring, 74.1% ($n = 19,474$) of successful hunters checked just one bird. In 2011, those numbers were similar with 74.2% ($n = 18,994$) of spring hunters telechecking only one bird.

Fall Hunting Season

The 2011–2012 fall turkey season in Kentucky resulted in a total of 3,837 turkeys being telechecked (Figure 6); that is down 13.8% from 4,451 birds taken the previous fall. Males and females accounted for 37.9 and 62.1% of last year's harvest, respectively. Juvenile gobblers (≤ 2 years of age) constituted 20.3% of male birds taken. 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 2010 Southeast Directors Wild Turkey Committee Meeting.

HUNTING ACCIDENTS

Kentucky's 2011 spring turkey season concluded with no hunting-related incidents.

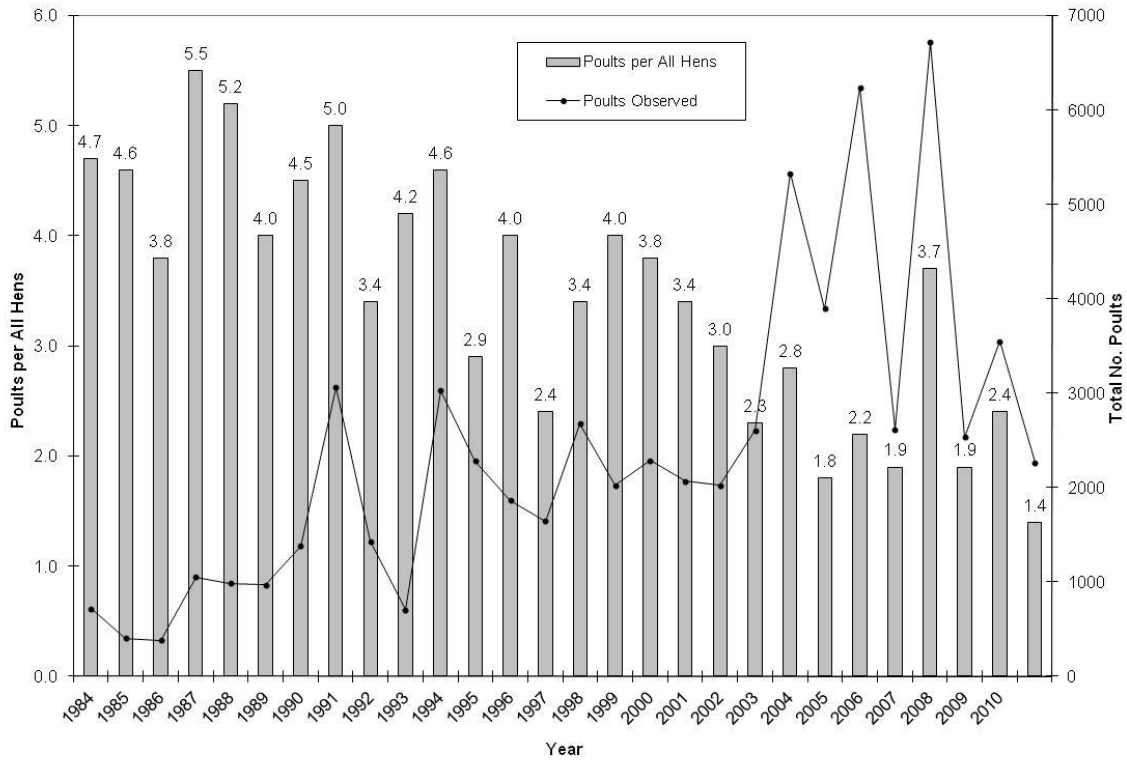


Figure 1. Annual variation in poults per all hens recorded by summer brood surveys in Kentucky, 1984–2011.

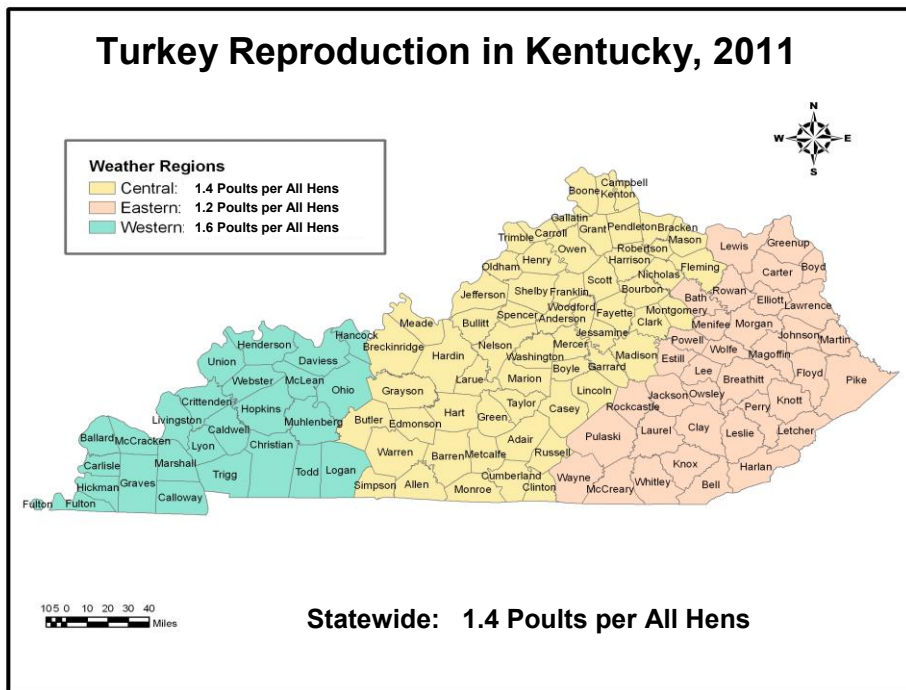


Figure 2. Wild turkey reproduction by weather region in Kentucky, 2011.

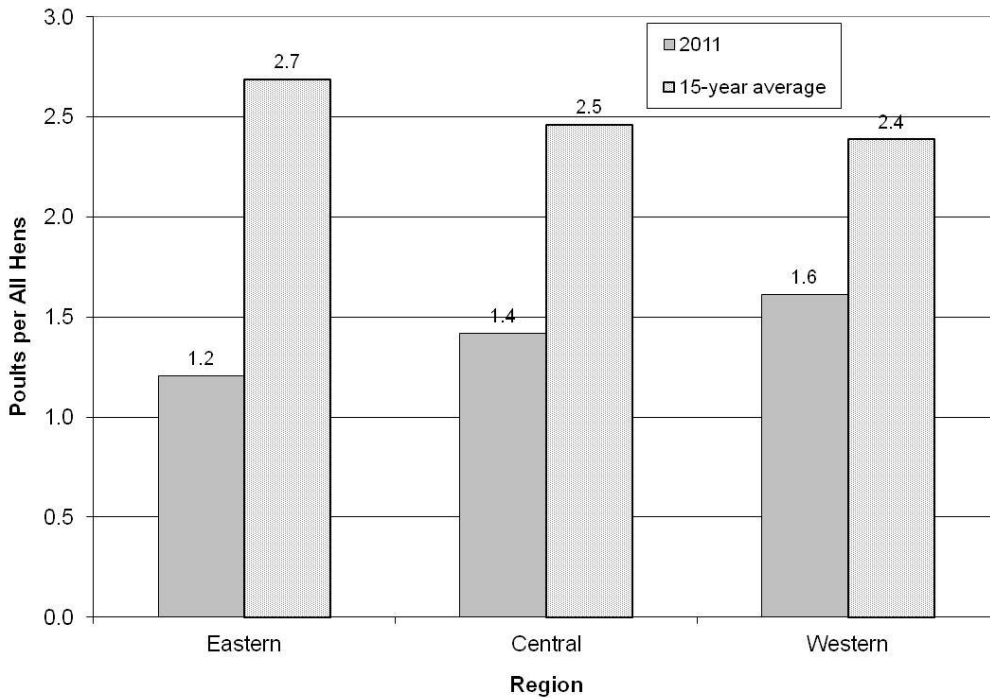


Figure 3. Regional variation in the number of poult per all hens across turkey regions in Kentucky, 2011.

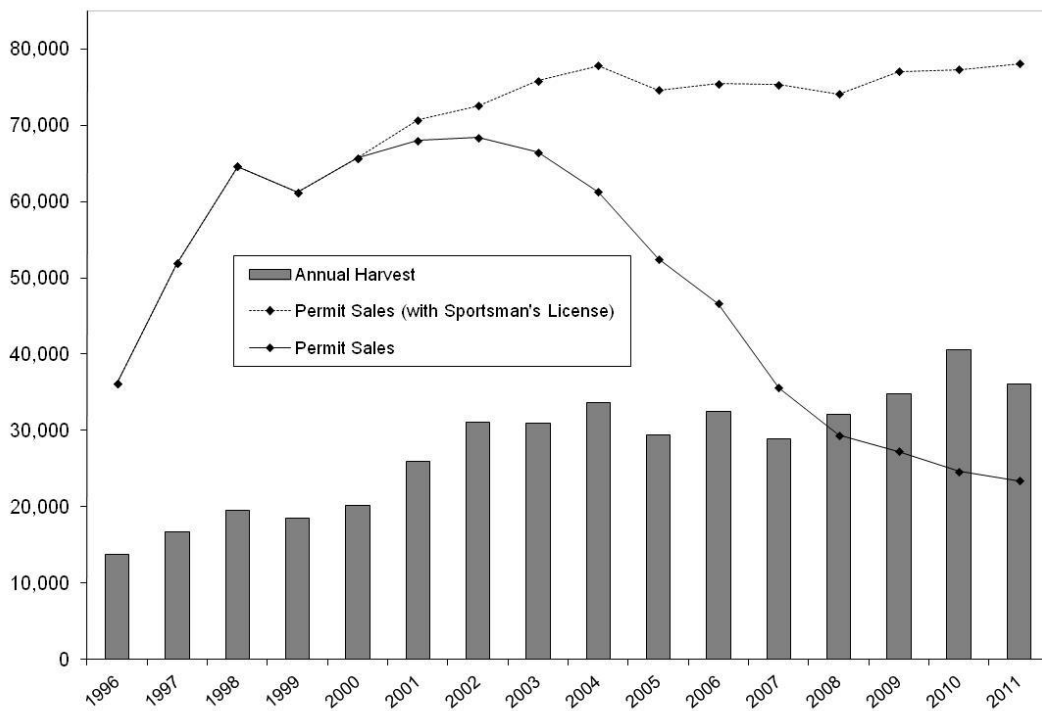


Figure 4. Permits sales and turkeys harvested in Kentucky since the first statewide season, 1996–2011.

Table 1. Spring harvest numbers for wild turkeys in Kentucky, 2011–2012.

Period	Year		% change
	2011	2012	
Youth-only	1,838	2,311	+ 25.7%
Statewide opening weekend	8,903	10,849	+ 21.9%
Days 3–23	21,450	19,908	- 7.2%
Total	32,191	33,068	- 10.8%

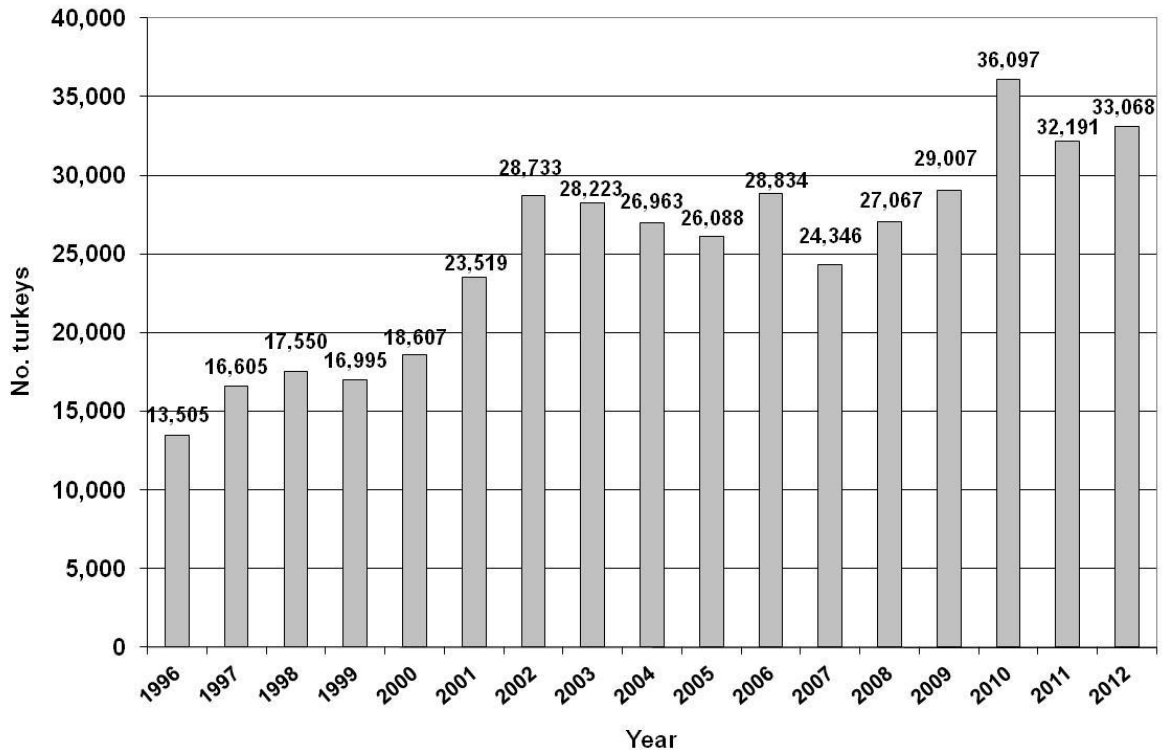


Figure 5. Annual spring harvest returns for wild turkeys since the first statewide season in Kentucky, 1996–2012.

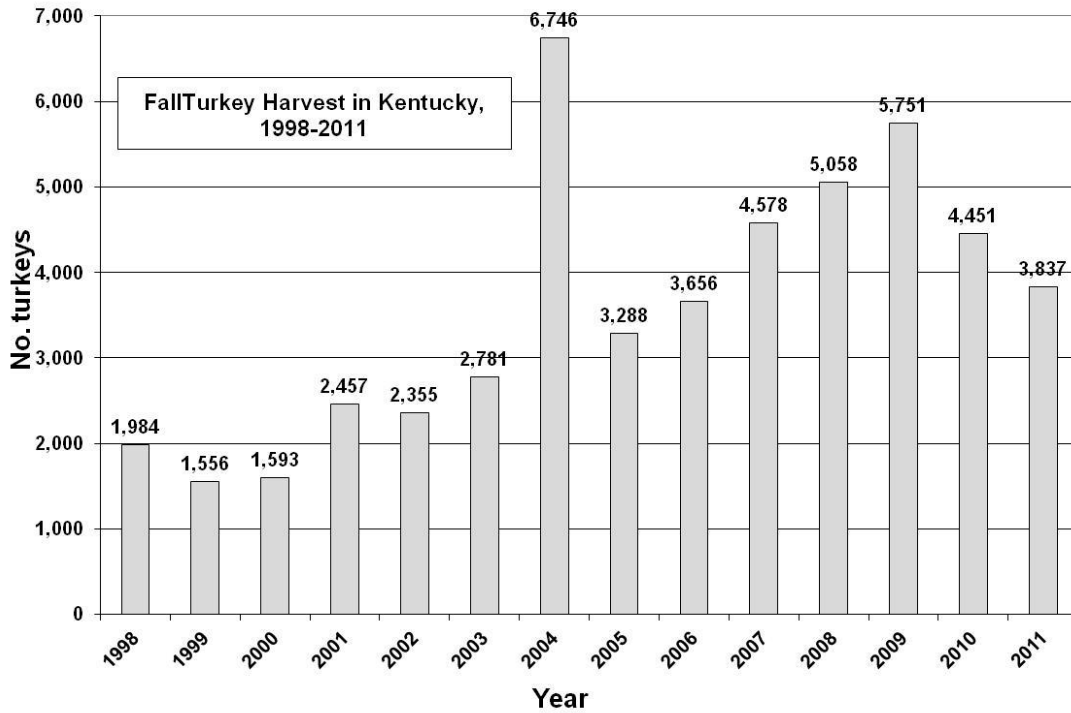


Figure 6. Annual fall harvest returns for wild turkeys since the first statewide season in Kentucky, 1998–2011.

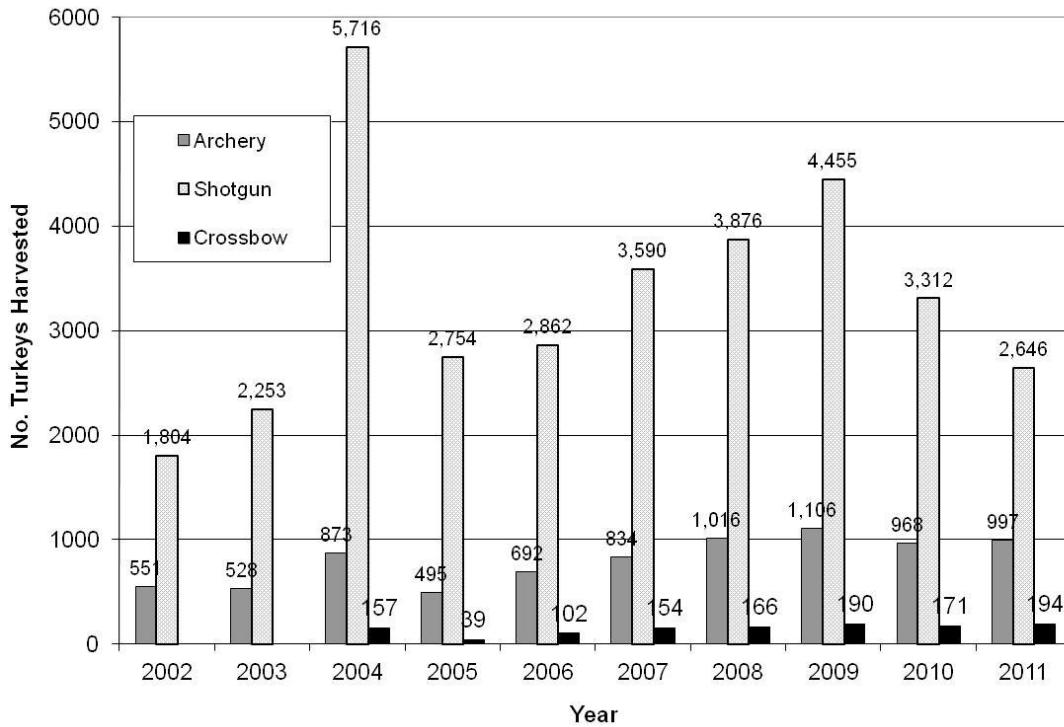


Fig. 7. Annual fall harvest returns by implement for wild turkeys in Kentucky, 2002–2011.



2011 MICHIGAN FALL TURKEY HUNTER SURVEY

Brian J. Frawley

ABSTRACT

A survey of turkey hunters was conducted following the 2011 fall hunting season to determine turkey harvest and hunter participation. In 2011, 20,906 hunters purchased 22,386 licenses for the fall turkey hunting season, which was 25% lower than in 2010 (30,005 licenses sold in 2010). Most license buyers (95%) purchased a single hunting license. During the 2011 fall hunt, an estimated 15,712 hunters harvested about 4,724 turkeys. Hunter numbers and their hunting effort decreased 24% and 25%, respectively, from 2010. The 2011 harvest decreased 29% from 2010 (6,645 turkeys harvested in 2010). Hunter success was 28% in 2011 (versus 29% success in 2010). About 56% of the hunters in 2011 rated their hunting experience as excellent, very good, or good (versus 59% satisfaction in 2010). The number of hunters, hunting effort, and turkey harvested in 2011 decreased significantly from 2010; however, hunting success and hunter satisfaction did not change significantly from 2010.

INTRODUCTION

Fall wild turkey (*Meleagris gallopavo*) hunting seasons were implemented in Michigan to help maintain turkey populations at levels matching biological and social carrying capacities. In 2011, 8 management units totaling about 36,078 square miles were open for fall turkey hunting during September 15-November 14 (Figure 1).

People interested in obtaining a turkey hunting license could enter into a random drawing (lottery) conducted by the Department of Natural Resources (DNR) or purchase a license for Hunt 501 without going through the lottery. Applicants could choose one hunt area for the drawing. Any licenses available after the drawing was completed were made available on a first-come, first-served basis to applicants and nonapplicants



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beginning August 29. Licenses were available for five management units (units HA, L, M, W, and YY) after the drawing was completed (Table 1). Hunters could purchase one of these remaining licenses per day until quotas were met.

Licenses for Hunt 407 (Unit HA) and Hunt 501 (Unit YY) were valid on private lands only, while licenses for hunts 401, 402, 403, 404, 405 and 406 (units G, GB, GC, L, M, and W) were valid on either land ownership types (i.e., public or private land). Hunters were allowed to take one turkey of either sex with the harvest tag issued with each license. Turkey could be harvested with a shotgun, crossbow, or archery equipment. Hunters 12-years-old or older could use a crossbow to hunt turkeys. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit did not need the stamp.

The Pure Michigan Hunt (PMH) was a unique multi-species hunting opportunity offered for the first time in 2010. Individuals could purchase an unlimited number of applications for the PMH. Three individuals were randomly chosen from all applications, and winners received elk, bear, spring turkey, fall turkey, and antlerless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The fall turkey hunting licenses were valid for all areas open for hunting turkey.

The Natural Resources Commission and DNR have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are one of the management tools used to meet their statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are among the primary objectives of these surveys.

METHODS

The DNR provided hunters the option to voluntarily report information about their turkey hunting activity via the internet. This option was advertised in the hunting regulations booklet, on the DNR website, and in an email message that was sent to licensees that had provided an email address to the DNR. Hunters could report information anytime during the hunting season. Hunters reported whether they hunted, number of days spent afield, and how many turkeys they harvested. Successful hunters also were asked to report where their turkeys were taken (public or private land) and beard length of harvested birds. Birds with a beard <4 inches long were classified as juveniles (<1 year old), while birds with longer beards were adults (\geq 1 year old) (Kelly 1975). In addition, hunters were asked what type of hunting equipment was used to hunt turkeys and kill turkeys. Finally, hunters rated their overall hunting experience (excellent, very good, good, fair, or poor).

Following the 2011 fall turkey hunting season, a questionnaire was sent to 6,599 randomly selected people that had purchased a turkey hunting license (resident turkey, senior resident turkey, and nonresident turkey licenses) and had not already voluntarily reported harvest information via the internet. Hunters receiving the questionnaire were asked to report the same information that was collected from hunters that reported voluntarily on the internet.

Estimates were calculated using a stratified random sampling design that included 11 strata (Cochran 1977). Strata 1-8 consisted of hunters with licenses for a single management unit ($N_G=96$; $N_{GB}=143$; $N_{GC}=113$; $N_{HA}=1,094$; $N_L=661$; $N_M=1,058$; $N_W=111$; and $N_{YY}=16,583$). The ninth stratum included hunters obtaining only a Pure Michigan Hunt license ($N=2$). The tenth stratum consisted of hunters having licenses for multiple management units ($N=127$). Finally, hunters that had voluntarily reported information about their hunting activity via the internet before the mail survey sample was selected were treated as the eleventh stratum ($N=919$).

Because estimates were based on information collected from random samples of hunting license buyers, these estimates were subject to sampling errors (Cochran 1977). Thus, a 95% confidence limit (CL) was calculated for each estimate. In theory, this CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during late December 2011, and up to two follow-up questionnaires were mailed to nonrespondents. Although 6,599 people were sent the questionnaire, 64 surveys were undeliverable resulting in an adjusted sample size of 6,535. Questionnaires were returned by 4,788 people, yielding a 73% adjusted response rate. In addition, 919 people voluntarily reported information about their hunting activity via the internet.

RESULTS

In 2011, the DNR offered 50,053 licenses for sale (versus 52,553 licenses in 2010), and hunters purchased 22,386 licenses (versus 30,005 licenses in 2010) for the fall turkey hunting season (Table 1). A total of 2,220 licenses were purchased by people successful in the drawing, and another 654 leftover licenses were purchased by people that had applied for a hunt in the drawing. In addition, 19,512 licenses were purchased by people that had not entered into the drawing.

The number of licenses sold in 2011 decreased 25% from 2010. The average age of the license buyers was 49 years (Figure 2). About 6% of the license buyers were

younger than 17 years old (1,262). Most license buyers (95%) purchased a single hunting license in 2011 (Figure 3). About 4% of hunters purchased 2 licenses, 1% of hunters purchased 3 licenses, and less than 1% of hunters purchased 4 or more licenses.

The number of people buying a license in 2011 (20,906) increased by about 8% in ten years from 2001 (19,348 people purchased a license in 2001). Although the overall number of license buyers increased during the last ten years, there were fewer license buyers for most age classes between 29 and 47 years of age in 2011, compared to 2001 (Figure 4). However, there were increased hunter numbers among the youngest and oldest age classes in 2011. The increased hunter numbers in the oldest age classes likely represented the rising share of older people in the population as the baby-boom generation aged and life expectancies have increased. The increased participation among the youngest hunters likely reflected the lowering of the minimum age requirements. In 2011, hunters had to be at least 10 years old to participate; while the hunters had to be at least 12 years old to participate in 2001.

In 2011, about 15,712 hunters spent 102,866 days afield pursuing turkeys ($\bar{x} = 6.5 \pm 0.2$ days/hunter) (Tables 2 and 3, Figure 5). The number of people pursuing turkeys in 2011 decreased significantly by 24%, and their hunting effort decreased significantly by 25% from 2010. About 95% of the hunters that went afield were males ($14,973 \pm 251$), 5% of the hunters were females (725 ± 101), and the sex of less than 1% of hunters was unknown (14 ± 1).

About 28% of active hunters successfully harvested a turkey in 2011, and they harvested an estimated 4,724 turkeys (Tables 4 and 5). The number of turkeys harvested decreased significantly by 29% from 2010 (6,645 turkeys harvested in 2010), but hunter success in 2011 was not significantly different from 2010 (Figure 5). Among the 4,329 hunters that took at least one turkey, 94% ($4,064 \pm 218$) of these hunters took one turkey, 4% (184 ± 49) took 2 turkeys, 1% (54 ± 28) took 3 turkeys, and less than 1% took more than 3 turkeys (Figure 6). Hunter success was statistically greater for hunters using private lands than for hunters using public lands in 2011 (28% versus 19%, Table 4).

About 94% ($14,821 \pm 242$) of turkey hunters hunted solely on private land, 4% (617 ± 36) hunted on public land only, and 2% (242 ± 26) hunted on both private and public lands. Additionally, 32 ± 11 hunters hunted on land of unknown ownership. Of the 4,724 turkeys harvested in 2011, 96% of these birds were taken on private land (4,541), while about 4% of the harvest (177) was taken on public land (Table 5). Additionally, 6 birds were harvested from land of unknown ownership. About 58% of the harvested birds had a beard ($2,742 \pm 206$). Most of these bearded birds (86%) were adults ($2,349 \pm 193$); 14% were juvenile birds (393 ± 78).

Of the 15,712 turkey hunters in 2011, nearly 56% rated their hunting experience as either excellent, very good, or good (Table 6). Satisfaction was statistically greater for hunters using private lands than for hunters using public lands (56% versus 49%). Changes in hunter satisfaction between years generally parallel changes in hunter success (Figure 7). Between 2010 and 2011, hunter success was nearly unchanged

(29% in 2010 versus 28% in 2011), and satisfaction was nearly unchanged (59% in 2010 versus 56% in 2011).

Hunter numbers were greatest in Kent, St. Clair, Sanilac, Tuscola, Allegan, and Jackson counties; these counties had more than 550 hunters (Table 7). Harvest was greatest in Jackson, Tuscola, Lapeer, Kent, Ottawa, Allegan, Saginaw, and Calhoun counties; these counties had more than 150 turkeys taken by hunters.

Most hunters ($65 \pm 1\%$; $10,265 \pm 275$ hunters) used shotguns while hunting turkeys, although $27 \pm 1\%$ ($4,176 \pm 222$) of the hunters used either a compound, recurve, or long bow and $23 \pm 1\%$ ($3,626 \pm 211$) used a crossbow. About 75% ($3,540 \pm 238$) of the harvested turkeys were taken with a shotgun, while 10% (484 ± 85) were taken with either a compound, recurve, or long bow. About 15% (701 ± 103) of harvested turkeys were taken with a crossbow. About $31 \pm 2\%$ of the hunters using a shotgun took at least one turkey with their shotgun; $11 \pm 2\%$ of hunters using a bow took a turkey; and $19 \pm 3\%$ of the hunters using a crossbow harvested a turkey.

About $68 \pm 3\%$ of the turkey hunters using a crossbow had obtained the crossbow stamp. However, $83 \pm 2\%$ of the hunters using a crossbow in 2011 had obtained a crossbow stamp during at least one year during 2009-2011.

ACKNOWLEDGEMENTS

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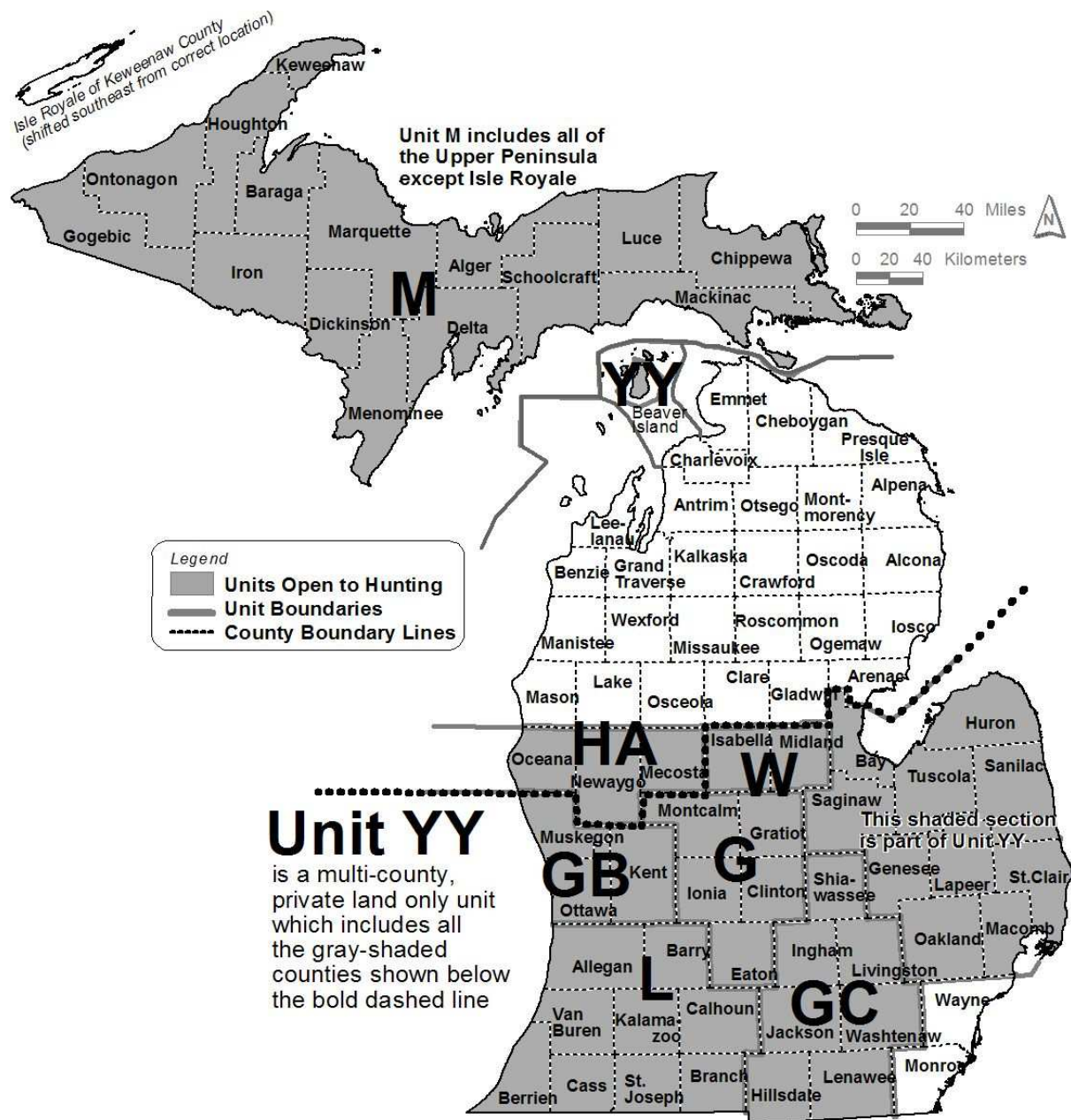


Figure 1. Management units open for fall turkey hunting in Michigan, 2011.

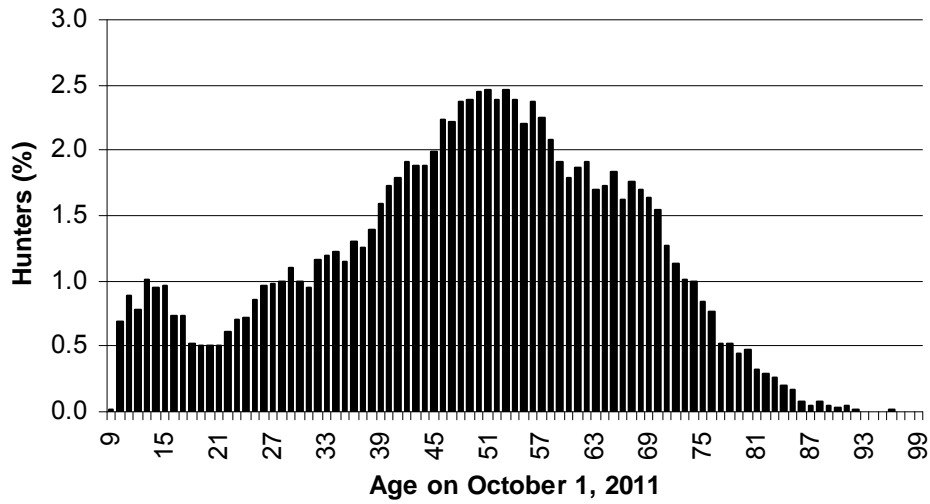


Figure 2. Age of people that purchased a turkey hunting license in Michigan for the 2011 fall hunting season ($\bar{x} = 49$ years). Licenses were purchased by 20,906 people.

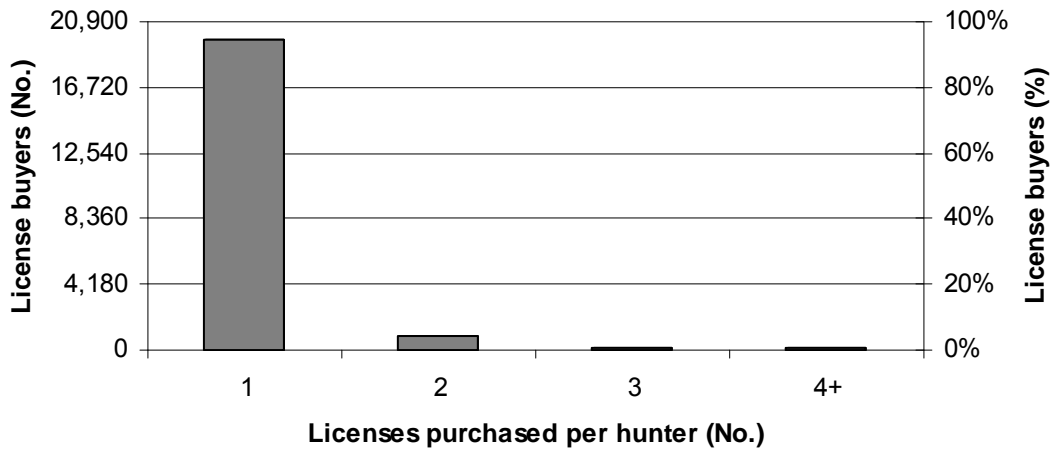


Figure 3. Number of licenses purchased per person for hunting turkey in Michigan during the 2011 fall hunting season.

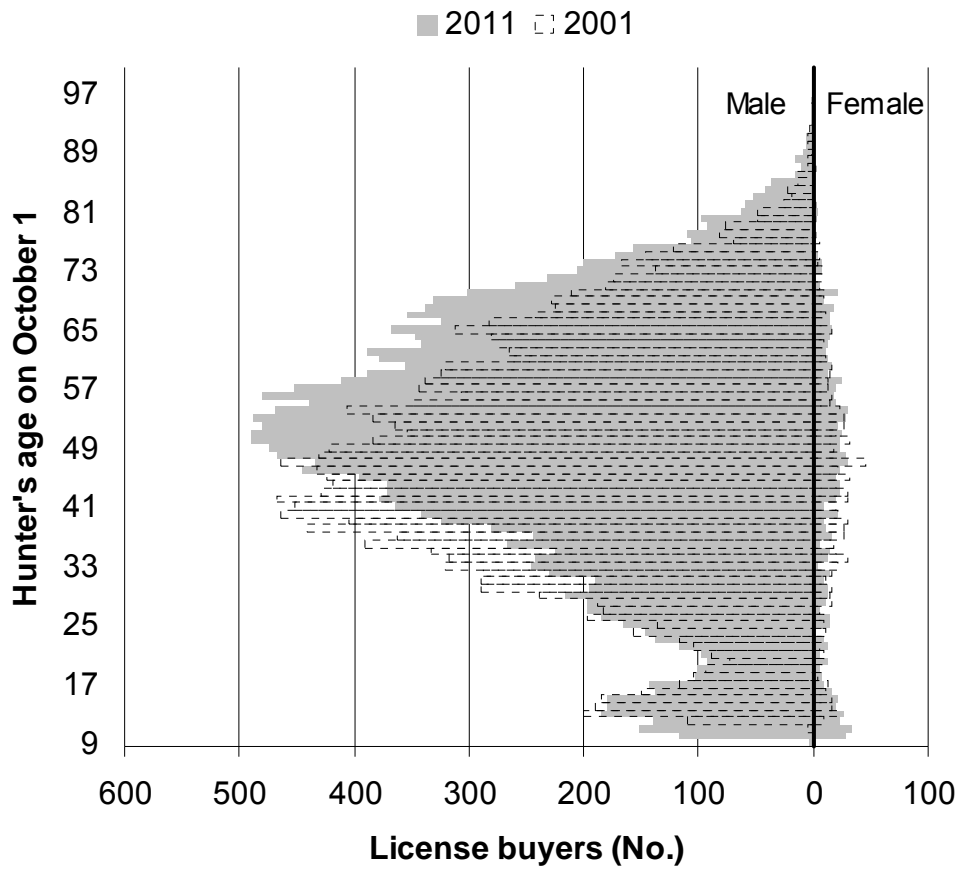


Figure 4. Number of fall turkey hunting license buyers in Michigan by age and sex during 2001 and 2011 hunting seasons. The number of people buying a license was 19,348 in 2001 and 20,906 in 2011.

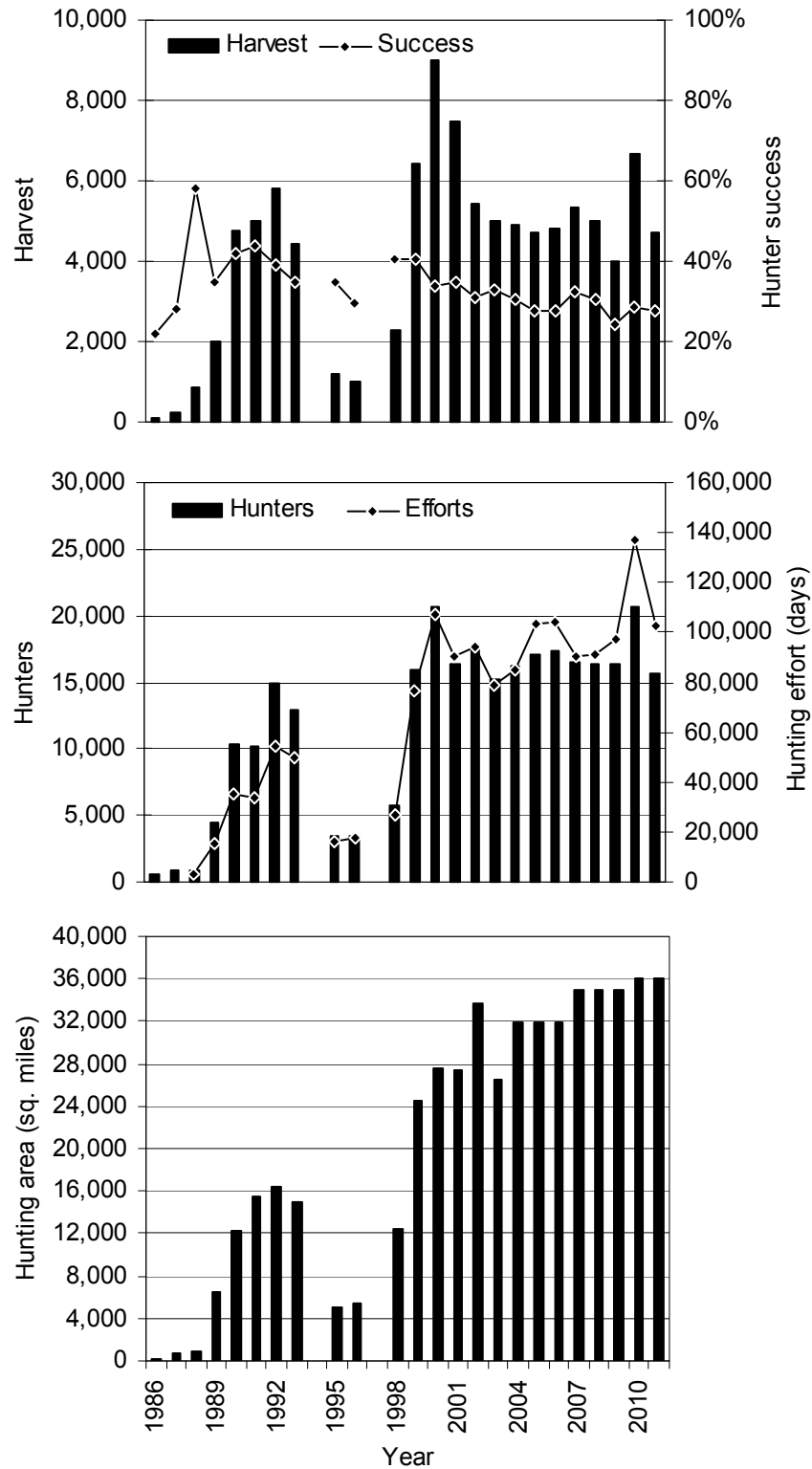


Figure 5. Number of hunters, hunting efforts (days), harvest, hunting success, and hunting area during the fall turkey hunting season, 1986-2011. Turkeys were not hunted during the fall in 1994 and 1997.

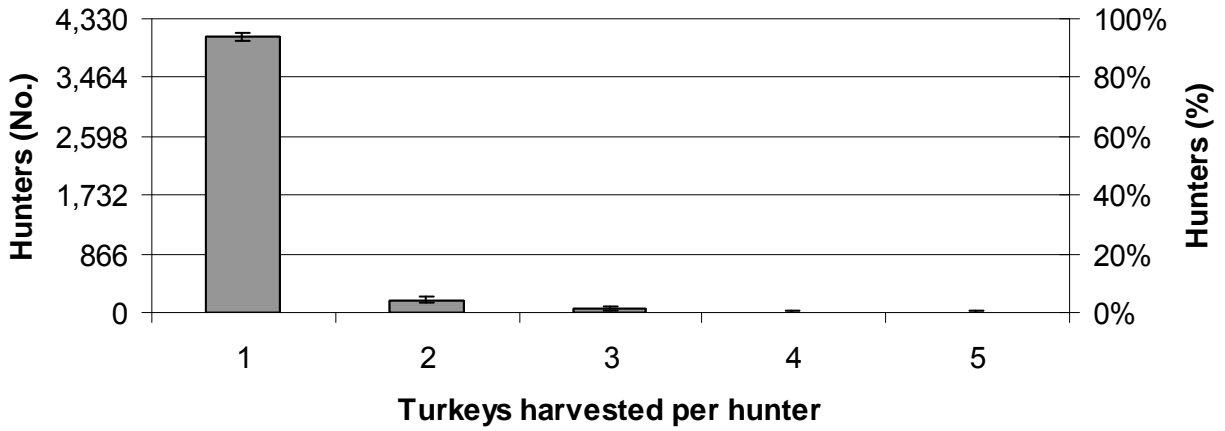


Figure 6. Number of turkeys harvested per successful hunter in Michigan during the 2011 fall hunting season.

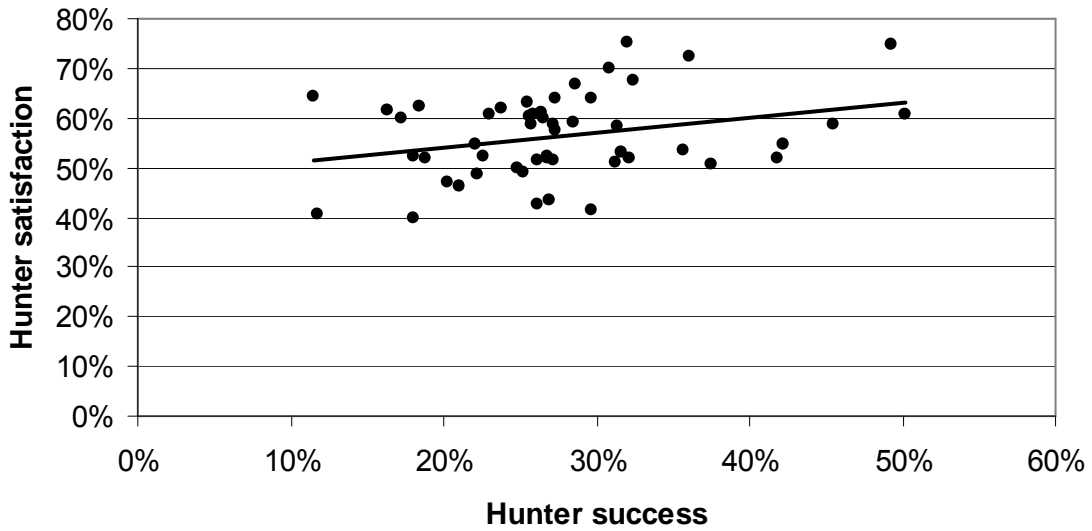


Figure 7. Hunter satisfaction (expressed as the percentage of hunters rating their hunting experience as excellent, very good, or good) associated with hunter success for each of 51 counties in Michigan during the 2011 fall turkey hunting season (included only counties with at least 20 hunters).

Table 1. Number of hunting licenses available and people applying for licenses during the 2011 Michigan fall turkey hunting season.

Management unit	Hunt	Licenses available (quota) ^a	Number of eligible applicants	Number of applicants successful in drawing	Number of licenses remaining after drawing	Number of licenses purchased by successful applicants	Number of leftover licenses purchased by applicants	Number of leftover licenses purchased by people not in the drawing	Licenses sold
G	401	200	350	200	0	123	0	0	123
GB	402	250	293	250	0	165	0	0	165
GC	403	200	835	200	0	134	0	0	134
HA ^b	407	1,700	1,110	1,110	590	752	63	473	1,288
L	404	1,000	629	629	371	466	40	290	796
M	405	1,500	685	685	815	468	61	691	1,220
W	406	200	178	178	22	109	4	15	128
YY ^b	501	45,000	0	0	45,000	0	486	18,043	18,529
Pure MI ^c	NA ^c	3	0	0	0	3	0	0	3
Statewide	All	50,053	4,080	3,252	46,798	2,220	654	19,512	22,386

^aQuotas were assigned by hunts within each management unit.

^bLicenses were valid on private lands only.

^cPure Michigan Hunt. These hunters could hunt in any management unit.

Table 2. Number of hunters during the 2011 Michigan fall turkey hunting season.

Area and hunting license	Land type							
	Private		Public		Unknown		All land types	
	Total	95% CL	Total	95% CL	Total	95% CL	Total ^a	95% CL
G								
401	42	5	58	5	1	1	93	4
501 ^b	1,283	142	0	0	0	0	1,283	142
Multiple ^c	13	3	2	2	0	0	16	4
Subtotal	1,338	142	60	5	1	1	1,391	142
GB								
402	83	7	62	7	0	0	128	5
501 ^b	1,132	134	0	0	0	0	1,132	134
Multiple ^c	21	4	1	1	0	0	21	4
Subtotal	1,235	134	63	7	0	0	1,281	134
GC								
403	50	5	51	5	0	0	89	5
501 ^b	2,654	194	0	0	0	0	2,654	194
Multiple ^c	9	3	0	0	0	0	9	3
Subtotal	2,713	194	51	5	0	0	2,752	194
HA								
407 ^b	909	30	0	0	0	0	909	30
Multiple ^c	20	4	0	0	0	0	20	4
Subtotal	929	30	0	0	0	0	929	30
L								
404	371	23	263	22	5	4	585	18
501 ^b	2,529	192	0	0	0	0	2,529	192
Multiple ^c	29	4	6	2	1	0	32	5
Subtotal	2,931	193	270	22	6	4	3,147	193
M								
405	576	34	376	32	19	9	838	29
Multiple ^c	5	2	7	3	0	0	12	3
Subtotal	581	34	384	32	19	9	851	30
W								
406	49	5	27	4	1	1	75	5
501 ^b	447	85	0	0	0	0	447	85
Multiple ^c	3	2	4	2	0	0	5	2
Subtotal	500	85	31	5	1	1	527	85
Eastern YY^d								
501 ^b	4,208	232	0	0	0	0	4,208	232
Multiple ^c	5	2	0	0	0	0	5	2
Subtotal	4,213	232	0	0	0	0	4,213	232
Unknown YY^e								
501 ^b	925	124	0	0	0	0	925	124
Multiple ^c	10	3	2	2	0	0	10	3
Subtotal	935	124	2	2	0	0	935	124
Statewide								
Total	15,029	243	862	41	28	10	15,712	241

^aNumber of hunters may not add up to total because hunters could hunt on both private and public lands.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^eHunting activity occurred at unknown location within Management Unit YY.

Table 3. Days of hunting effort during the 2011 Michigan fall turkey hunting season.

Area and hunting license	Land type							
	Private		Public		Unknown		All land types	
	Total	95% CL	Total	95% CL	Total	95% CL	Total ^a	95% CL
G								
401	185	30	397	72	0	0	582	72
501 ^b	8,094	1,202	0	0	0	0	8,094	1,202
Multiple ^c	62	19	11	9	0	0	73	20
Subtotal	8,340	1,202	408	73	0	0	8,749	1,204
GB								
402	499	69	355	53	0	0	854	79
501 ^b	6,552	1,114	0	0	0	0	6,552	1,114
Multiple ^c	122	27	4	3	0	0	126	28
Subtotal	7,173	1,116	358	54	0	0	7,531	1,117
GC								
403	338	45	301	48	0	0	640	59
501 ^b	17,440	1,837	0	0	0	0	17,440	1,837
Multiple ^c	77	30	0	0	0	0	77	30
Subtotal	17,856	1,838	301	48	0	0	18,157	1,838
HA								
407 ^b	5,803	384	0	0	0	0	5,803	384
Multiple ^c	121	32	0	0	0	0	121	32
Subtotal	5,924	386	0	0	0	0	5,924	386
L								
404	2,226	236	1,579	205	13	13	3,818	281
501 ^b	18,544	2,032	0	0	0	0	18,544	2,032
Multiple ^c	175	37	27	12	10	0	213	42
Subtotal	20,948	2,046	1,609	205	23	13	22,579	2,051
M								
405	2,895	273	2,202	275	70	64	5,168	368
Multiple ^c	21	10	41	17	0	0	62	19
Subtotal	2,916	273	2,243	276	70	64	5,230	369
W								
406	296	48	138	28	25	23	460	53
501 ^b	2,530	596	0	0	0	0	2,530	596
Multiple ^c	15	10	34	22	0	0	49	26
Subtotal	2,841	598	172	36	25	23	3,039	599
Eastern YY^d								
501 ^b	27,000	2,176	0	0	0	0	27,000	2,176
Multiple ^c	22	10	0	0	0	0	22	10
Subtotal	27,022	2,176	0	0	0	0	27,022	2,176
Unknown YY^e								
501 ^b	4,591	874	0	0	0	0	4,591	874
Multiple ^c	37	17	7	5	0	0	45	18
Subtotal	4,628	874	7	5	0	0	4,636	874
Statewide								
Total ^a	97,648	3,352	5,100	360	118	69	102,866	3,366

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^eHunting activity occurred at unknown location within Management Unit YY.

Table 4. Hunting success (proportion of hunters taking at least one turkey) during the 2011 Michigan fall turkey hunting season.

Area and hunting license	Land type						All land types	
	Private		Public		Unknown			
	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	17	6	10	3	0	0	14	3
501 ^a	25	5	0	0	0	0	25	5
Multiple ^b	44	13	100	0	0	0	53	12
Subtotal	25	5	14	4	0	0	25	5
GB								
402	28	5	12	5	0	0	24	4
501 ^a	31	6	0	0	0	0	31	6
Multiple ^b	34	9	100	0	0	0	34	9
Subtotal	31	5	14	5	0	0	30	5
GC								
403	17	5	10	4	0	0	15	4
501 ^a	29	4	0	0	0	0	29	4
Multiple ^b	86	12	0	0	0	0	86	12
Subtotal	29	4	10	4	0	0	29	3
HA								
407 ^c	22	3	0	0	0	0	22	3
Multiple ^c	37	10	0	0	0	0	37	10
Subtotal	23	3	0	0	0	0	23	3
L								
404	24	4	19	4	33	36	23	3
501 ^a	26	4	0	0	0	0	26	4
Multiple ^b	50	9	40	19	0	0	50	8
Subtotal	26	3	19	4	28	30	25	3
M								
405	34	4	22	4	22	20	34	3
Multiple ^c	25	19	33	17	0	0	30	13
Subtotal	34	4	22	4	22	20	34	3
W								
406	28	6	23	8	0	0	27	5
501 ^a	31	9	0	0	0	0	31	9
Multiple ^b	64	23	0	0	0	0	47	20
Subtotal	31	8	20	7	0	0	30	8
Eastern YY^c								
501 ^a	27	3	0	0	0	0	27	3
Multiple ^b	25	19	0	0	0	0	25	19
Subtotal	27	3	0	0	0	0	27	3
Unknown YY^d								
501 ^a	25	6	0	0	0	0	25	6
Multiple ^b	25	13	50	31	0	0	38	15
Subtotal	25	6	50	31	0	0	25	6
Statewide								
Total	28	1	19	2	22	15	28	1

^aLicenses were valid on private lands only.

^bHunters that purchased multiple hunting licenses for multiple hunting areas.

^cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^dHunting activity occurred at unknown location within Management Unit YY.

Table 5. Number of turkeys harvested during the 2011 Michigan fall turkey hunting season.

Area and hunting license	Land type						All land types ^a	
	Private		Public		Unknown			
	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	7	2	6	2	0	0	13	3
501 ^b	325	73	0	0	0	0	325	73
Multiple ^c	8	3	2	2	0	0	11	3
Subtotal	340	73	8	2	0	0	349	73
GB								
402	23	5	8	3	0	0	31	5
501 ^b	375	86	0	0	0	0	375	86
Multiple ^c	8	2	1	1	0	0	9	3
Subtotal	406	86	9	3	0	0	415	86
GC								
403	8	3	5	2	0	0	13	3
501 ^b	854	132	0	0	0	0	854	132
Multiple ^c	10	4	0	0	0	0	10	4
Subtotal	873	132	5	2	0	0	878	132
HA								
407 ^b	211	27	0	0	0	0	211	27
Multiple ^c	12	5	0	0	0	0	12	5
Subtotal	223	28	0	0	0	0	223	28
L								
404	93	15	49	11	2	2	144	19
501 ^b	735	135	0	0	0	0	735	135
Multiple ^c	25	6	5	3	0	0	30	8
Subtotal	854	136	54	12	2	2	909	137
M								
405	205	27	91	20	4	4	300	32
Multiple ^c	1	1	2	2	0	0	4	2
Subtotal	206	27	94	20	4	4	304	32
W								
406	14	4	6	2	0	0	20	4
501 ^b	138	48	0	0	0	0	138	48
Multiple ^c	2	1	0	0	0	0	2	1
Subtotal	154	48	6	2	0	0	160	48
Eastern YY^d								
501 ^b	1,238	156	0	0	0	0	1,238	156
Multiple ^c	1	1	0	0	0	0	1	1
Subtotal	1,239	156	0	0	0	0	1,239	156
Unknown YY^e								
501 ^b	244	71	0	0	0	0	244	71
Multiple ^c	2	2	1	1	0	0	4	2
Subtotal	246	71	1	1	0	0	247	71
Statewide								
Total ^a	4,541	266	177	23	6	5	4,724	267

^aColumn and row totals for hunting effort may not equal statewide totals because of rounding errors.

^bLicenses were valid on private lands only.

^cHunters that purchased multiple hunting licenses for multiple hunting areas.

^dIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^eHunting activity occurred at unknown location within Management Unit YY.

Table 6. Proportion of hunters that rated their hunting experience as excellent, very good, or good during the 2011 Michigan fall turkey hunting season.

Area and hunting license	Land type						All land types	
	Private		Public		Unknown			
	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
G								
401	49	7	57	6	0	0	56	5
501 ^a	58	6	0	0	0	0	58	6
Multiple ^b	72	12	100	0	0	0	77	10
Subtotal	58	5	59	6	0	0	58	5
GB								
402	59	6	64	7	0	0	61	5
501 ^a	64	6	0	0	0	0	64	6
Multiple ^b	58	10	100	0	0	0	58	10
Subtotal	64	5	64	7	0	0	64	5
GC								
403	61	7	53	6	0	0	54	5
501 ^a	64	4	0	0	0	0	64	4
Multiple ^b	71	15	0	0	0	0	71	15
Subtotal	64	4	53	6	0	0	64	4
HA								
407 ^a	47	3	0	0	0	0	47	3
Multiple ^b	49	11	0	0	0	0	49	11
Subtotal	47	3	0	0	0	0	47	3
L								
404	51	4	45	5	50	33	48	3
501 ^a	57	4	0	0	0	0	57	4
Multiple ^b	62	8	60	19	0	0	65	8
Subtotal	57	4	45	5	44	29	56	3
M								
405	52	4	44	5	50	23	51	3
Multiple ^b	25	19	83	13	0	0	60	14
Subtotal	51	4	45	5	50	23	51	3
W								
406	47	7	73	8	0	0	56	5
501 ^a	52	10	0	0	0	0	52	10
Multiple ^b	64	23	67	24	0	0	74	19
Subtotal	52	9	72	8	0	0	53	8
Eastern YY^c								
501 ^a	54	3	0	0	0	0	54	3
Multiple ^b	75	19	0	0	0	0	75	19
Subtotal	54	3	0	0	0	0	54	3
Unknown YY^d								
501 ^a	49	7	0	0	0	0	49	7
Multiple ^b	75	13	100	0	0	0	75	13
Subtotal	49	7	100	0	0	0	49	7
Statewide								
Total	56	2	49	3	45	17	56	2

^aLicenses were valid on private lands only.

^bHunters that purchased multiple hunting licenses for multiple hunting areas.

^cIncluded Bay, Genesee, Huron, Lapeer, Macomb, Oakland, Saginaw, Sanilac, St Clair, and Tuscola counties within Management Unit YY.

^dHunting activity occurred at unknown location within Management Unit YY.

Table 7. Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

County	Hunters ^a		Hunting efforts (days) ^a		Harvest ^a		Hunter success		Hunter satisfaction ^b	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL
Alger	65	16	378	122	19	10	26	11	43	13
Allegan	554	85	3,453	746	169	82	23	6	52	8
Baraga	15	8	90	69	4	4	29	24	43	27
Barry	530	82	3,820	869	118	42	20	6	47	8
Bay	118	45	829	415	34	28	24	17	62	19
Berrien	231	55	1,454	433	67	29	28	11	59	12
Branch	304	70	1,982	664	50	28	16	9	62	11
Calhoun	447	83	3,074	765	150	52	32	9	67	9
Cass	284	64	2,125	737	101	51	26	10	61	11
Charlevoix	70	34	236	145	35	24	49	25	75	21
Chippewa	68	16	437	134	15	8	22	10	55	12
Clinton	287	68	1,637	539	76	36	27	11	60	12
Delta	121	21	614	145	48	13	37	9	51	9
Dickinson	102	19	556	136	27	11	25	8	50	10
Eaton	281	68	1,479	439	33	22	11	8	65	12
Genesee	462	87	3,189	775	132	50	25	8	63	9
Gogebic	45	13	258	93	5	4	12	9	40	15
Gratiot	223	58	1,840	619	61	30	27	12	59	13
Hillsdale	365	77	1,891	556	141	64	31	10	70	10
Houghton	12	7	60	48	0	0	0	0	46	29
Huron	316	72	1,673	494	116	54	30	11	42	11

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

County	Hunters ^a		Hunting efforts (days) ^a		Harvest ^a		Hunter success		Hunter satisfaction ^b	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL
Ingham	406	81	2,610	701	131	45	32	9	75	8
Ionia	222	59	1,351	473	38	24	17	10	60	13
Iron	121	21	622	151	59	15	45	9	59	9
Isabella	214	55	1,275	379	76	34	36	13	53	13
Jackson	557	94	3,450	790	184	62	30	8	64	8
Kalamazoo	345	66	2,425	647	93	34	26	8	51	10
Kent	631	98	3,250	674	173	51	27	7	64	8
Keweenaw	0	0	0	0	0	0	0	0	0	0
Lapeer	518	92	3,007	676	178	57	31	8	58	9
Lenawee	387	80	2,687	739	112	50	26	9	59	10
Livingston	493	86	3,271	855	98	41	18	7	62	9
Luce	0	0	0	0	0	0	0	0	0	0
Mackinac	22	10	93	47	6	5	29	20	67	20
Macomb	156	50	1,064	424	46	31	26	14	61	16
Marquette	79	17	519	178	21	9	27	10	43	11
Mecosta	210	26	1,138	185	50	13	22	6	49	7
Menominee	139	22	718	138	46	14	31	8	51	8
Midland	307	66	1,728	468	82	33	27	9	52	11
Montcalm	415	79	2,415	601	137	47	32	9	52	10
Muskegon	239	55	1,711	596	71	33	27	10	51	12
Newaygo	389	33	2,536	311	88	19	21	4	46	5

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

Table 7 (continued). Number of hunters, hunting effort, harvest, hunter success, and hunter satisfaction during the 2011 Michigan fall turkey hunting season, summarized by county.

County	Hunters ^a		Hunting efforts (days) ^a		Harvest ^a		Hunter success		Hunter satisfaction ^b	
	Total	95% CL	Total	95% CL	Total	95% CL	%	95% CL	%	95% CL
Oakland	487	89	2,433	559	130	48	25	8	49	9
Oceana	191	26	1,295	243	37	11	18	5	40	7
Ontonagon	51	14	315	111	26	10	50	14	61	14
Ottawa	425	80	2,510	675	170	62	36	9	72	8
Saginaw	461	87	3,189	938	157	57	32	9	53	10
St. Clair	605	99	3,754	824	120	48	19	7	52	8
St. Joseph	193	51	1,747	670	52	30	23	11	61	13
Sanilac	594	98	4,112	928	109	41	18	6	52	8
Schoolcraft	34	11	275	129	14	8	42	17	52	17
Shiawassee	265	66	1,636	587	117	47	42	12	55	12
Tuscola	585	98	3,536	830	184	66	27	8	57	8
Van Buren	349	72	2,366	722	101	41	27	9	52	10
Washtenaw	347	72	2,540	736	94	40	26	9	60	10
Unknown	1,250	128	6,213	901	322	73	24	5	48	5

^aNumber of hunters does not add up to statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.

^bProportion of hunters that rated their hunting experience as excellent, very good, or good.

MISSOURI WILDLIFE HARVEST AND POPULATION STATUS REPORT

WILD TURKEY – 2012

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POPULATION STATUS

Missouri's wild turkey population estimate during spring 2012 is approximately 300,000 birds. This estimate is based on the assumption that 15% of the population was harvested during the 2012 spring season. Based on harvest and survey data, the state's turkey population has declined by as much as 30% during the last decade, although the magnitude of this decline has not been uniform across the state. Until last year's hatch, which served to bolster turkey numbers in the region, the turkey population in Northeast Missouri had declined by as much as 50%.

Until 2011, turkey production in Missouri had been extremely poor in recent years, with the statewide poult-to-hen ratio exceeding 1.5 only twice since 2004. Fortunately, dry weather during 2011 provided ideal conditions for turkey recruitment throughout much of Missouri. As a result, most of the state experienced substantially better production than that experienced in recent years. At the statewide scale, production in 2011 was the highest since 2002, and was 42% and 21% higher than the previous 5 and 10-year averages, respectively.

The improved hatch of 2011 has served to bolster turkey numbers throughout much of Missouri. Based on results from the Department's bowhunter observation survey, archers observed 30% more turkeys per unit effort during fall 2011 than they did in 2010. More turkeys were observed per unit effort in all regions of the state, with the exception of the Northwest. Especially notable increases in turkey observations occurred in Northeast and Southeast Missouri, where observations were 98% and 86% greater in fall 2011 than they were in 2010, respectively.

Missouri's spring turkey harvest has been relatively stable for the past 4 years, after declining markedly from 2004-09. Spring turkey hunter success has also been relatively stable since 2007. As expected, the percentage of juvenile males in the spring harvest increased considerably in 2012. Improved production in 2011 should provide hunters with a large number of 2-year old males for the 2013 spring season, however, continued improvements in production will be needed to increase turkey numbers to the levels observed in the early to mid-2000s.

REPRODUCTION

The Missouri Department of Conservation (MDC) has been conducting a wild turkey brood survey annually since 1959. During the survey, Department staff and citizen volunteers record observations of hens and poults (and gobblers since 2008) during June, July, and August. Turkey observations are collected at the county-level and analyzed by Turkey Productivity Region (Figure 1), which are counties grouped by similar land cover composition.

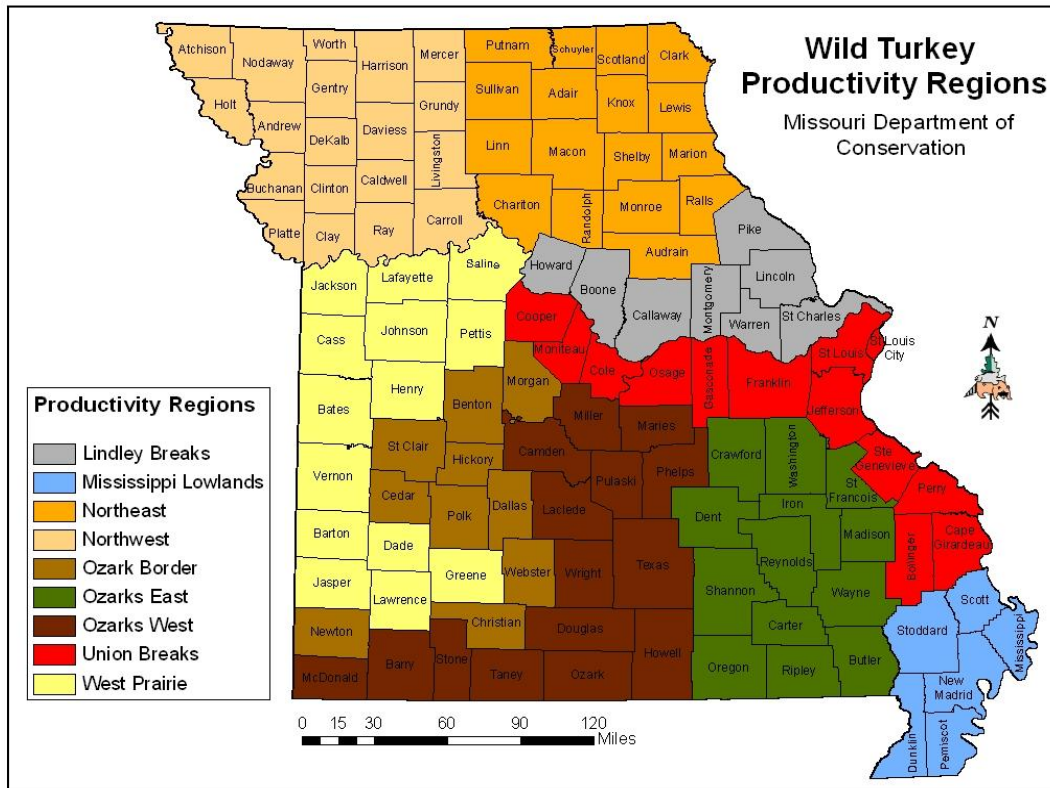


Figure 1. Turkey Productivity Regions in Missouri. Regions consist of counties grouped together by similar land cover composition.

In 2011, MDC staff and approximately 7,000 volunteers recorded observations of over 53,000 turkeys during the 3-month survey period, including 3,587 broods (Table 1). At the statewide scale, 45% of hens were observed with a brood. The percentage of hens observed with a brood ranged from a low of 35% in the Northwest region to a high of 56% in the Lindley Breaks region (Table 2). Statewide, the average brood size was 4.7 poults. Average brood size ranged from a low of 4.2 poults in the Union Breaks region to a high of 5.1 poults in the Ozark Border region (Table 2).

Table 1. Wild turkey observations by Turkey Productivity Region (Figure 1). Data were obtained during Missouri's wild turkey brood survey conducted in June, July, and August, 2011.

Productivity Region	Hens w/ Broods	Hens w/o Broods	Total Hens	Poults	Broods	Gobblers
Lindley Breaks	1,070	824	1,894	5,149	561	786
Mississippi Lowlands	69	85	154	299	38	128
Northeast	1,092	1,111	2,203	5,493	629	1,128
Northwest	436	821	1,257	2,121	262	1,024
Ozark Border	639	931	1,570	3,257	333	982
Ozarks East	586	545	1,131	2,679	322	355
Ozarks West	628	993	1,621	3,013	352	792
Union Breaks	1,467	1,663	3,130	6,169	781	1,659
West Prairie	604	1,029	1,633	2,648	309	1,273
Statewide	6,591	8,002	14,593	30,828	3,587	8,127

Table 2. Wild turkey brood survey data by Turkey Productivity Region (Figure 1). Data were obtained during Missouri's wild turkey brood survey conducted in June, July, and August, 2011.

Productivity Region	% Hens w/ a Brood	Average Brood Size	Poult-to-Hen Ratio ^a	Gobbler-to-Hen Ratio
Lindley Breaks	56%	4.8	2.3	0.41
Mississippi Lowlands	45%	4.3	1.7	0.83
Northeast	50%	5.0	2.1	0.51
Northwest	35%	4.9	1.4	0.81
Ozark Border	41%	5.1	1.6	0.63
Ozarks East	52%	4.6	2.2	0.31
Ozarks West	39%	4.8	1.5	0.49
Union Breaks	47%	4.2	1.6	0.53
West Prairie	37%	4.4	1.4	0.78
Statewide	45%	4.7	1.7	0.56

^a Observations of more than 2 hens per brood were not included in poult-to-hen ratio calculations.

The 2011 statewide poult-to-hen ratio of 1.7 was 55% higher than the 2010 ratio, and 42% higher, 21% higher, and 6% lower than the 5, 10, and 20-year statewide averages, respectively (Table 3). Among Turkey Productivity Regions, poult-to-hen ratios ranged from a low of 1.4 in the Northwest and West Prairie regions to a high of 2.3 in the Lindley Breaks region (Table 3). Observations of more than 2 hens per brood were not included in poult-to-hen ratio calculations.

Table 3. Index (poult-to-hen ratio^a) of Missouri turkey production listed by Turkey Productivity Region (Figure 1). Data were obtained from the 2011 brood survey conducted in June, July, and August, and are compared to data from previous years. For each interval value, the % change indicates how the 2011 index compares to the previous year or the average for periodic intervals.

Productivity Region	2011 Index	1-year (2010) Change	5-year (2006-2010) Change	10-year (2001-2010) Change	20-year (1991-2010) Change
Lindley Breaks	2.3	+92%	+92%	+53%	+15%
Mississippi Lowlands	1.7	-26%	-6%	-35%	-23%
Northeast	2.1	+91%	+91%	+62%	+24%
Northwest	1.4	+17%	+17%	0%	-30%
Ozark Border	1.6	+60%	+60%	+14%	-11%
Ozarks East	2.2	+100%	+47%	+29%	+10%
Ozarks West	1.5	+36%	+25%	0%	-12%
Union Breaks	1.6	+45%	+23%	+7%	-6%
West Prairie	1.4	+27%	+56%	+17%	-22%
Statewide	1.7	+55%	+42%	+21%	-6%

^a Observations of more than 2 hens per brood were not included in poult-to-hen ratio calculations.

Especially notable improvements in production occurred in the Northeast, Lindley Breaks, and Ozarks East regions, where the poult-to-hen ratio was 91%, 92%, and 100% higher than that observed in 2010, respectively. In the Northeast and Lindley Breaks regions, production in 2011 was 62% and 53% higher than the previous 10-year averages, respectively.

Statewide, Missouri's poult-to-hen ratio peaked at 4.6 in 1971 and has steadily declined since the late 1980s (Figure 2). Production has been especially poor in recent years, with the statewide poult-to-hen ratio exceeding 1.5 only twice since 2004. The 2011 hatch represents a substantial improvement from production observed in recent years, and has bolstered turkey numbers, especially in Northeast Missouri where the largest decline in turkey numbers has been observed.

Index of Wild Turkey Production in Missouri

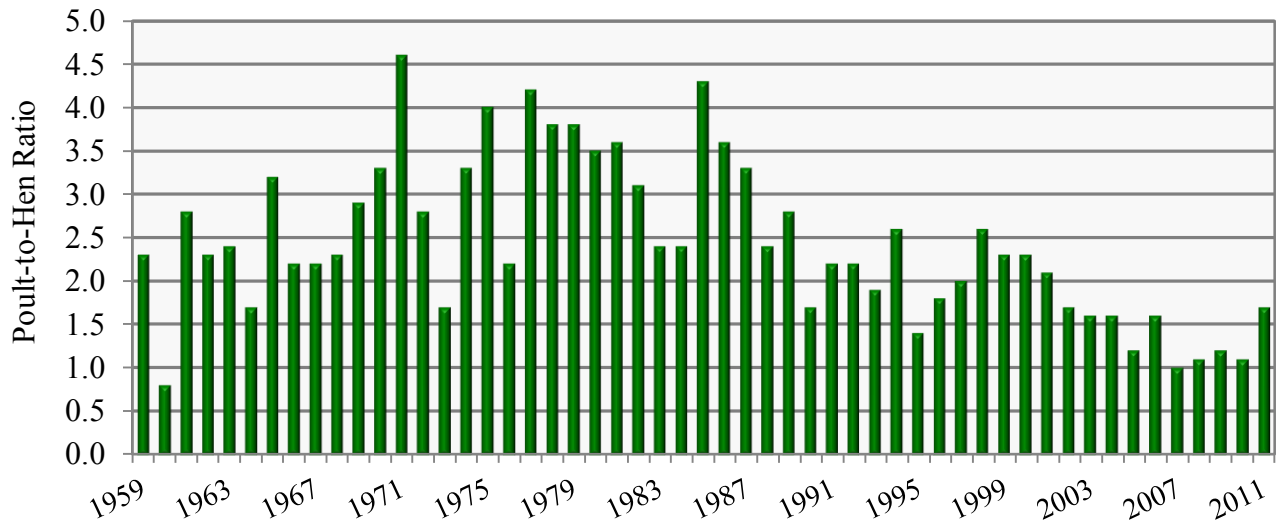


Figure 2. Missouri statewide turkey production derived from the wild turkey brood survey conducted in June, July, and August, 1959-2011. Observations of more than 2 hens per brood were not included in poult-to-hen ratio calculations.

RESTORATION

Turkey translocations have not occurred since the winter of 2006-07 when 100 birds were released in the Mississippi Lowlands region (Figure 1). Missouri’s primary efforts to establish wild turkey populations ended in 1979 after several thousand 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 at relatively low densities, have been only marginally successful. Because of the high cost of translocation and the marginal potential for long-term population increase in areas already containing turkeys, translocation of turkeys is currently a very low priority for the Department.

HARVEST

2012 Spring Turkey Season

During the youth spring turkey season, which took place on March 31 – April 1, hunters harvested 4,319 turkeys. This harvest total represents an 11% increase from the 2011 youth season harvest, and was 26% higher than the previous 5-year average. The 2012 youth harvest was the highest since the youth season was initiated in 2001. Hunters harvested 40,447 turkeys during the 21-day regular spring turkey season, which ran from April 16 – May 6. This harvest total represents a 6% increase from the 2011 regular season harvest, and is 4% lower than the previous 5-year average.

Juvenile male turkeys represented 26% of the regular season harvest, which is 27% higher than the previous 5-year average, and 23% higher than the previous 10-year average. The percentage of jakes in the spring harvest continues to track the poult-to-hen ratio from the previous year (Figure 3). The total 2012 spring harvest, including both the youth and regular seasons, was 44,766. This harvest total represents a 6% increase from the 2011 harvest, and is 2% lower than the previous 5-year average (Table 4). Counties with the highest total spring harvest were Franklin, Texas, and Greene, where 971, 883, and 762 turkeys were harvested, respectively (Figure 4).

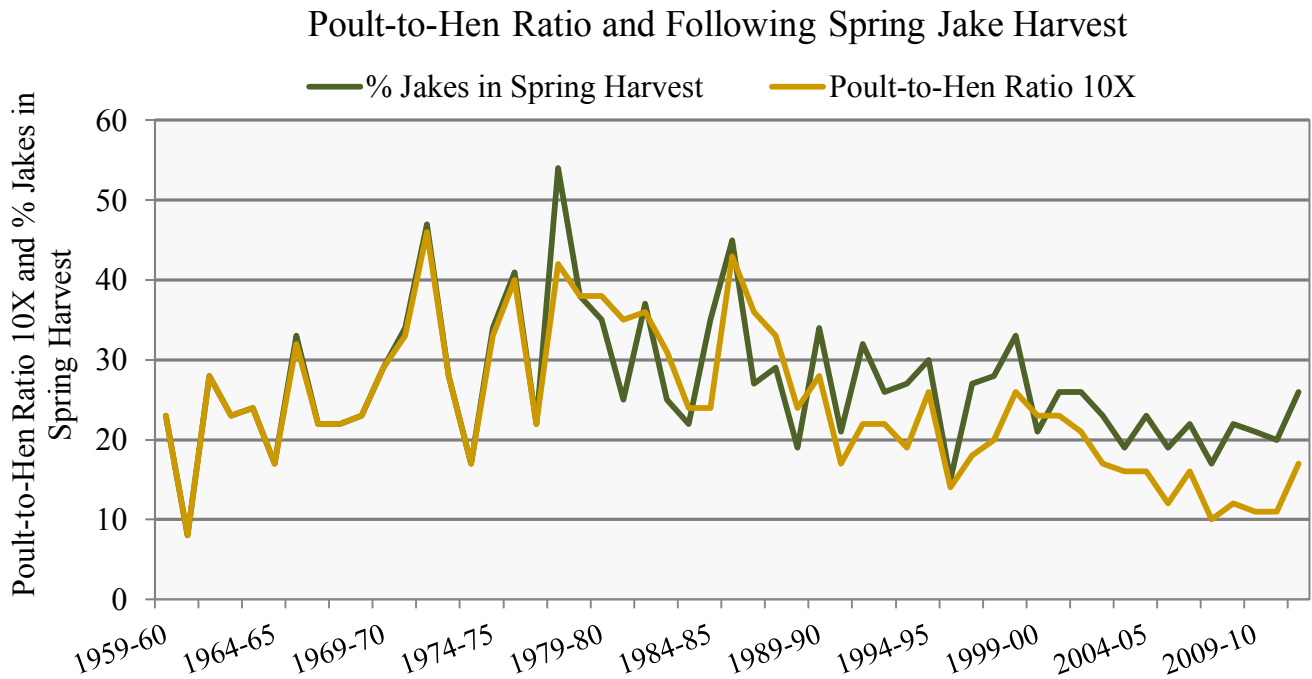


Figure 3. Missouri’s statewide poult-to-hen ratio multiplied by 10 compared with the percentage of jakes in the following year’s spring harvest, 1959-2012. Observations of more than 2 hens per brood were not included in poult-to-hen ratio calculations.

Table 4. Total spring turkey harvest (regular and youth seasons) and permit sales^a in Missouri, 1960-2012.

Year	Spring Harvest	% Change From Previous Year	Spring Permit Sales ^a	% Change From Previous Year
1960 ^b	94	n/a	698	n/a
1961	154	+63.8	1,001	+43.4
1962	183	+18.8	1,400	+39.9
1963	357	+95.1	1,778	+27.0
1964	369	+3.4	2,958	+66.4
1965	476	+29.0	3,099	+4.8
1966	572	+20.2	4,873	+57.2
1967 ^c	1,191	+108.2	6,702	+37.5
1968	1,270	+6.6	8,102	+20.9
1969	959	-24.5	7,577	-6.5
1970	1,598	+66.6	10,072	+32.9
1971	2,864	+79.2	12,306	+22.2
1972 ^d	4,456	+55.6	20,077	+63.1
1973 ^e	5,724	+28.5	29,633	+47.6
1974	5,286	-7.7	26,363	-11.0
1975	5,583	+5.6	28,621	+8.6
1976	7,851	+40.6	35,932	+25.5
1977	9,966	+26.9	36,596	+1.8
1978	10,203	+2.4	42,244	+15.4
1979	13,741	+34.7	46,008	+8.9
1980	16,722	+21.7	56,133	+22.0
1981	22,319	+33.5	63,914	+13.9
1982	17,744	-20.5	67,150	+5.1
1983	19,063	+7.4	73,347	+9.2
1984	19,317	+1.3	76,053	+3.7

^a Does not include no-cost landowner permits.

^b 3-day season with 1-bird bag limit.

^c Season length increased to 7 days.

^d Season length increased to 14 days.

^e Bag limit increased to 2 turkeys.

Table 4. Continued.

Year	Spring Harvest	% Change From Previous Year	Spring Permit Sales ^a	% Change From Previous Year
1985	24,770	+26.6	69,945	-8.0
1986	30,965	+25.0	77,972	+11.5
1987	35,951	+16.1	85,723	+9.9
1988	33,187	-7.7	94,301	+10.0
1989	35,618	+7.3	92,901	-1.5
1990	30,056	-15.6	92,093	-0.9
1991	32,237	+7.3	89,077	-3.3
1992	33,035	+2.5	89,803	+0.8
1993	34,354	+4.0	89,899	+0.1
1994	37,721	+9.8	90,810	0.0
1995	37,472	-1.2	99,412	+8.8
1996	37,708	+0.3	99,879	+0.5
1997	33,216	-12.4	99,933	+0.1
1998 ^f	48,462	+45.9	105,518	+5.6
1999	50,299	+3.8	110,939	+5.1
2000	56,841	+13.0	115,190	+3.8
2001 ^g	57,842	+1.7	117,736	+2.2
2002	57,034	-1.3	125,157	+6.3
2003	58,421	+2.4	130,021	+3.8
2004	60,744	+3.9	124,533	-4.2
2005	57,743	-5.2	120,215	-3.5
2006	54,712	-5.2	114,529	-4.8
2007	48,472	-11.0	115,897	+1.2
2008	46,134	-4.4	115,047	-0.7
2009	44,713	-3.5	112,579	-2.1
2010	46,194	+3.3	105,501	-6.3
2011	42,220	-8.6	101,106	-4.2
2012	44,766	+6.0	101,534	+0.4

^f Season length increased to 21 days.

^g 2-day youth season initiated.

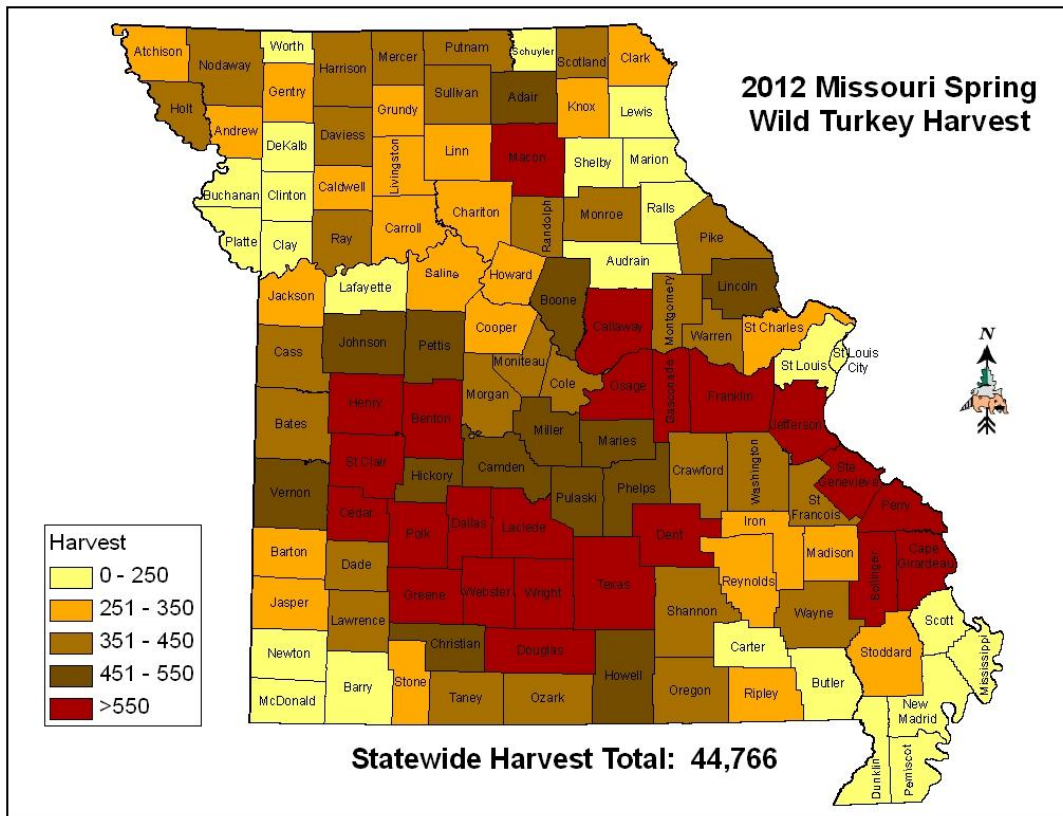


Figure 4. Total spring wild turkey harvest in Missouri, 2012.

Spring turkey hunting in Missouri is a substantial recreational activity with more than 500,000 days spent afield each year. Total permit sales for the 2012 spring turkey season (101,534; excluding no-cost landowner permits) increased slightly (< 1%) from the 2011 spring permit sales total. Spring turkey permit sales have declined by 22% from the peak year of 2003 (Figure 5, Table 4). Some of the permit sales decline, however, can be attributed to no-cost landowner permits which first became available in 2005. Spring turkey permit sales in 2012 included 95,089 resident permits and 6,445 nonresident permits. An additional 41,108 no-cost permits were distributed to landowners. The total number of spring turkey hunters in Missouri in 2012 was 138,372. Note that the total number of hunters does not equal the permit sales total, as some hunters also purchase a permit in addition to receiving a no-cost landowner permit.

Missouri Spring Wild Turkey Harvest and Permit Sales

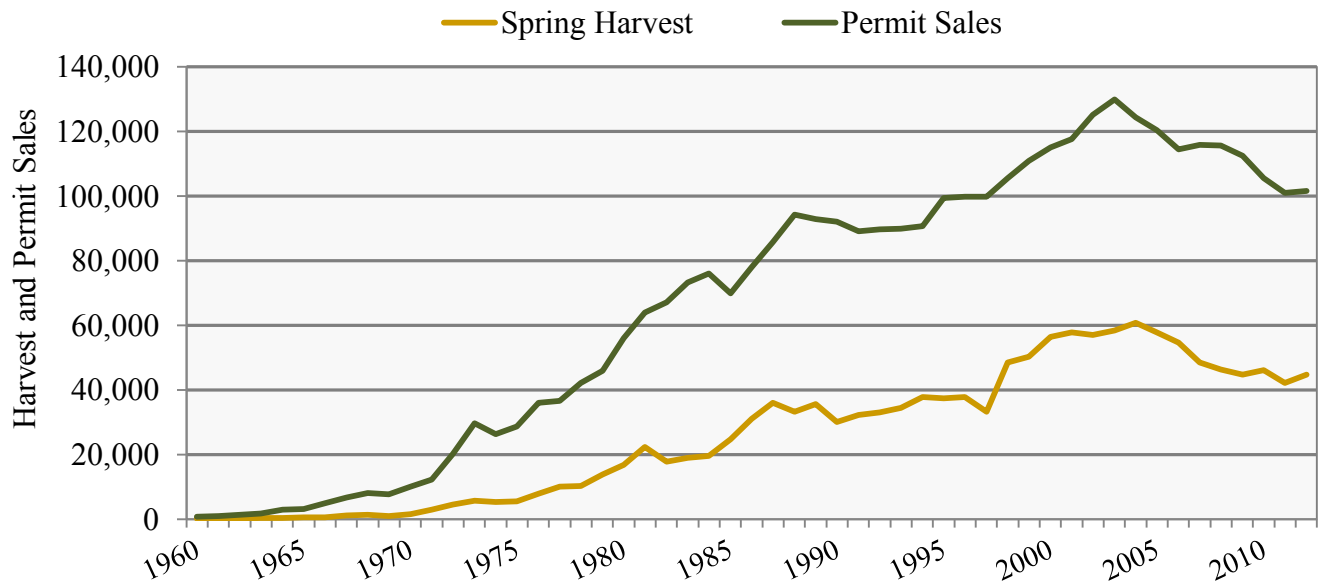


Figure 5. Number of wild turkeys harvested during the spring season (youth and regular seasons) in Missouri, and the number of turkey hunting permits sold for the spring season, 1960-2012. Permit sales do not include no-cost landowner permits.

Spring turkey harvest in Missouri has declined by 26% since the record harvest of over 60,000 birds in 2004. Although low production from 2007-10 and the resulting lower numbers of turkeys on the landscape have impacted harvest, spring permit sale declines have impacted harvest as well. Spring permit sales have declined by 22% since 2003, contributing in part to a 23% reduction in the number of hunting trips in 2011. Spring turkey hunter success has stabilized since 2007, after declining from 2000-06 (Figure 6). Based on harvest data, and hunter effort data from MDC’s 2011 post-season turkey hunter survey, the success rate for permit-buyers that hunted during the spring season was 30%. Based on responses from MDC’s 2011 turkey hunter information survey, 40% of permit-buyers that hunted during the spring season reported harvesting at least 1 turkey. The difference between success rates is likely due to positive response bias from the turkey hunter information survey.

Spring Turkey Hunter Success in Missouri

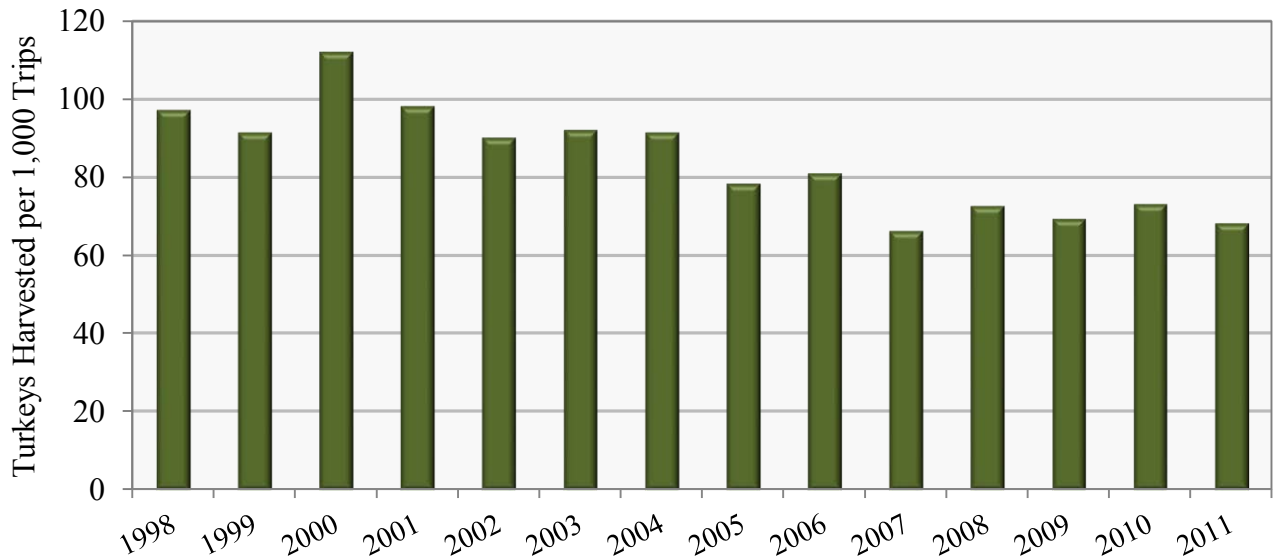


Figure 6. Statewide spring turkey hunter success in Missouri. Data are the number of turkeys harvested per 1,000 hunting trips, 1998-2011. Harvest data were obtained from the Telecheck reporting system and trip data were obtained from a post-season turkey hunter survey.

2011 Fall Firearms Turkey Season

The 2011 fall firearms turkey harvest total of 7,077 represents a 19% increase in harvest from the 2010 season, and was 20% lower than the previous 5-year average. The majority of the fall firearms harvest occurred in southern Missouri (Figure 7). The top 3 counties in harvest were Greene, Franklin, and Henry, where 210, 194, and 175 turkeys were harvested, respectively.

The increase in fall firearms turkey harvest in 2011 was due in part to a greater abundance of turkeys on the landscape. The improved production observed throughout much of Missouri in 2011 bolstered turkey numbers, resulting in more turkeys available for fall turkey hunters. In addition to increased turkey numbers, fall firearms turkey permit sales increased by 9% in 2011.

Of the 15,020 fall firearms turkey permits sold in 2011, 14,779 were purchased by Missouri residents and 241 by nonresidents; an additional 60,153 no-cost permits were distributed to landowners, which brought the total number of fall firearms turkey permits to 75,173. Although permit sales increased in 2011, fall firearms turkey hunting in Missouri has been declining in popularity since the late 1980s when over 50,000 permits were sold and over 28,000 turkeys were harvested during the 14-day season (Figure 8, Table 5).

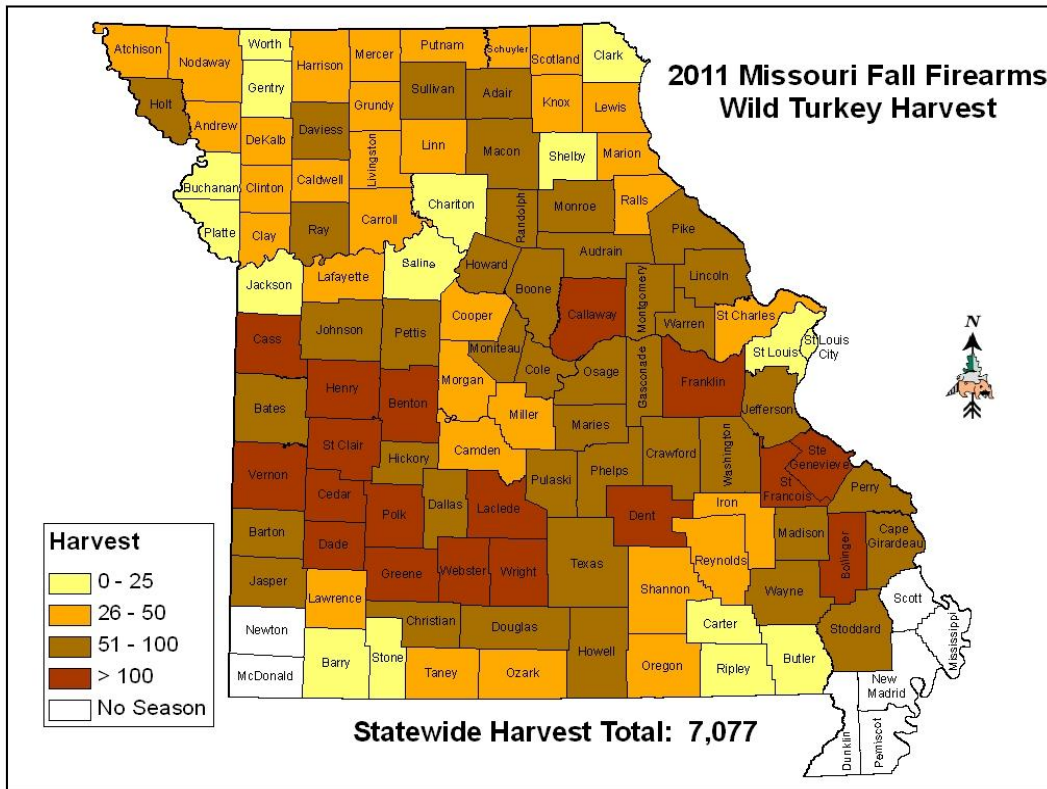


Figure 7. Missouri fall firearms wild turkey harvest, 2011.

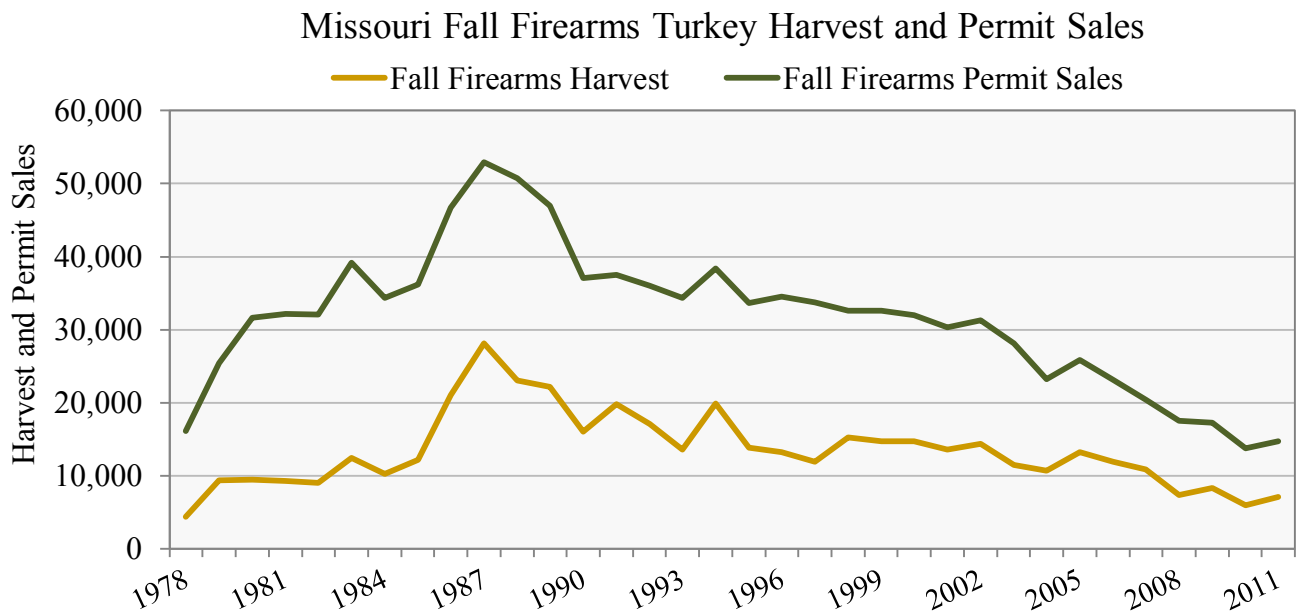


Figure 8. Number of wild turkeys harvested during the fall firearms turkey season in Missouri, and the number of fall firearms permits sold, 1978-2011. Permit sales do not include no-cost landowner permits.

Table 5. Fall firearms turkey harvest and permit sales^a in Missouri, 1978-2011.

Year	Fall Firearms Harvest	% Change From Previous Year	Fall Permit Sales ^a	% Change From Previous Year
1978 ^b	4,389	n/a	16,072	n/a
1979	9,387	+113.9	25,414	+58.1
1980 ^c	9,424	+0.4	31,606	+24.4
1981	9,293	-1.4	32,199	+1.9
1982	8,989	-3.3	32,051	-0.5
1983	12,394	+37.9	39,160	+22.2
1984	10,034	-19.0	34,375	-12.2
1985	12,179	+21.4	36,218	+5.4
1986 ^d	21,019	+72.6	46,688	+28.9
1987	28,139	+33.9	52,922	+13.4
1988	23,080	-18.0	50,715	-4.2
1989	22,131	-4.1	46,946	-7.4
1990	16,015	-27.6	37,080	-21.0
1991	19,788	+23.6	37,469	+1.0
1992	17,061	-13.8	36,033	-3.8
1993	13,569	-20.4	34,379	-4.6
1994	19,869	+46.4	38,424	+11.8
1995	13,866	-30.2	33,642	-12.6
1996	13,207	-4.8	34,522	+2.6
1997	11,866	-10.2	33,765	-2.2
1998	15,343	+29.3	32,593	-3.5
1999	14,651	-4.5	32,606	0.0
2000	13,230	-9.7	31,968	-2.0
2001	13,596	+2.8	30,949	-3.2
2002	14,392	+5.9	31,329	+1.2
2003	11,436	-20.5	28,108	-10.3

^a Does not include no-cost landowner permits.

^b 12-day season with 1-bird bag limit.

^c Season length increased to 14 days.

^d Bag limit increased to 2 turkeys.

Table 5. Continued.

Year	Fall Firearms Harvest	% Change From Previous Year	Fall Permit Sales ^a	% Change From Previous Year
2004	11,824	+3.4	23,215	-17.4
2005 ^e	13,233	+11.9	25,805	+11.2
2006	11,927	-9.9	23,141	-10.3
2007	10,859	-9.0	20,397	-11.9
2008	7,389	-32.0	17,533	-14.0
2009	8,351	+13.0	17,287	-1.4
2010	5,928	-29.0	13,736	-20.5
2011	7,077	+19.4	15,020	+9.3

^e Season length increased to 31 days.

2011-12 Fall Archery Turkey Season

Hunters harvested 2,923 turkeys during the 2011-12 fall archery turkey season (Figure 9). This was the third highest archery turkey harvest total (Figure 10). The 2011-12 harvest total represents a 34% increase from the 2010-11 season, and was 10% higher than the previous 5-year average. Unlike the fall firearms turkey harvest, which has shown a declining trend since the late 1980s (Figure 8), the fall archery turkey harvest continued to increase until the mid-2000s. Since 2005, archery turkey harvests have fluctuated substantially on an annual basis (Figure 10, Table 6).

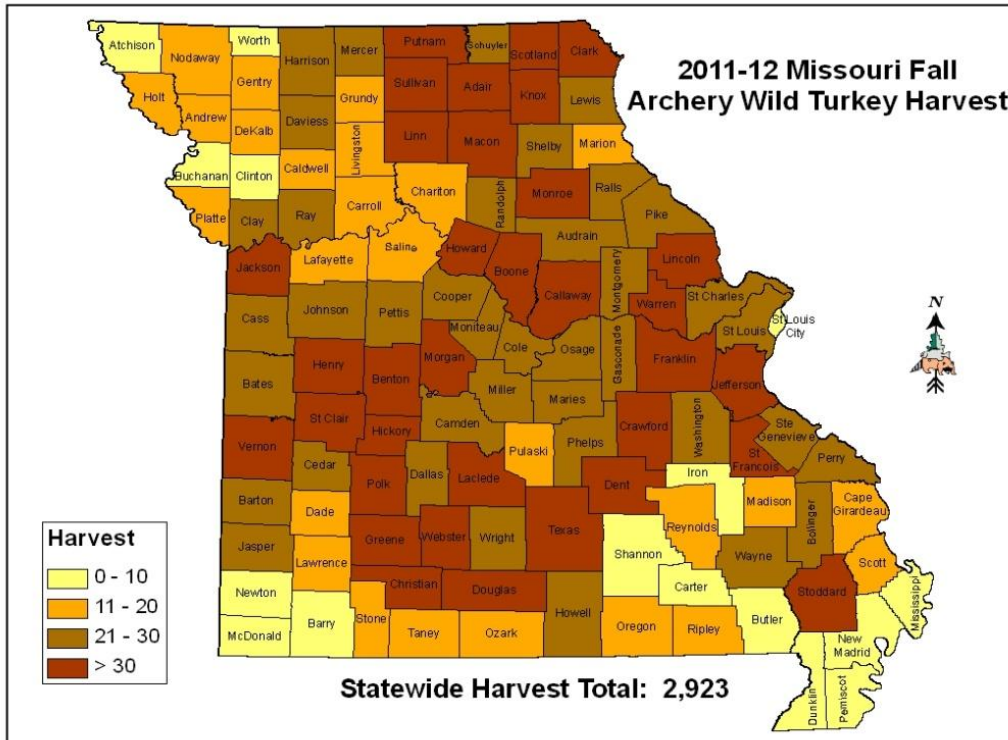


Figure 9. Missouri fall archery wild turkey harvest during the 2011-12 season.

Although archery permit sales have been relatively stable since the mid-1990s (Figure 11, Table 6), 110,647 permits were sold in 2011; the highest number sold since the season’s inception. An additional 82,486 no-cost landowner permits were distributed in 2011, which brought the total number of archery permits to 193,133. Of the 110,647 permits sold in 2011, 102,681 were purchased by Missouri residents and 7,966 by nonresident hunters.

Missouri Fall Archery Wild Turkey Harvest

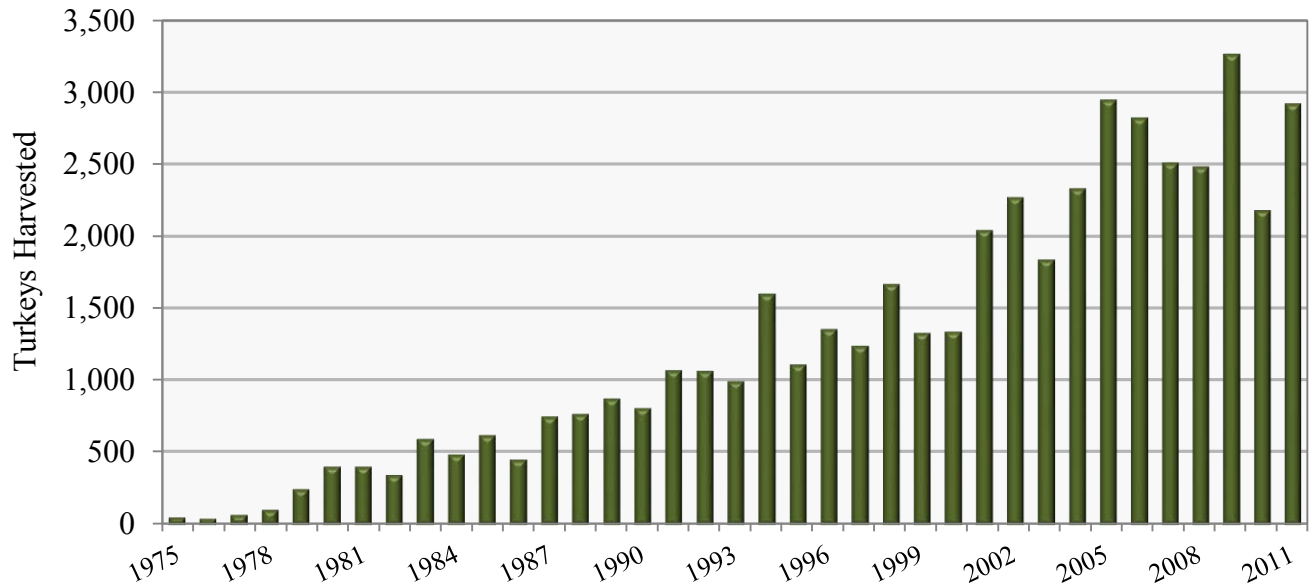


Figure 10. Missouri fall archery wild turkey harvest, 1975-2011.

Missouri Archery Deer and Turkey Permit Sales

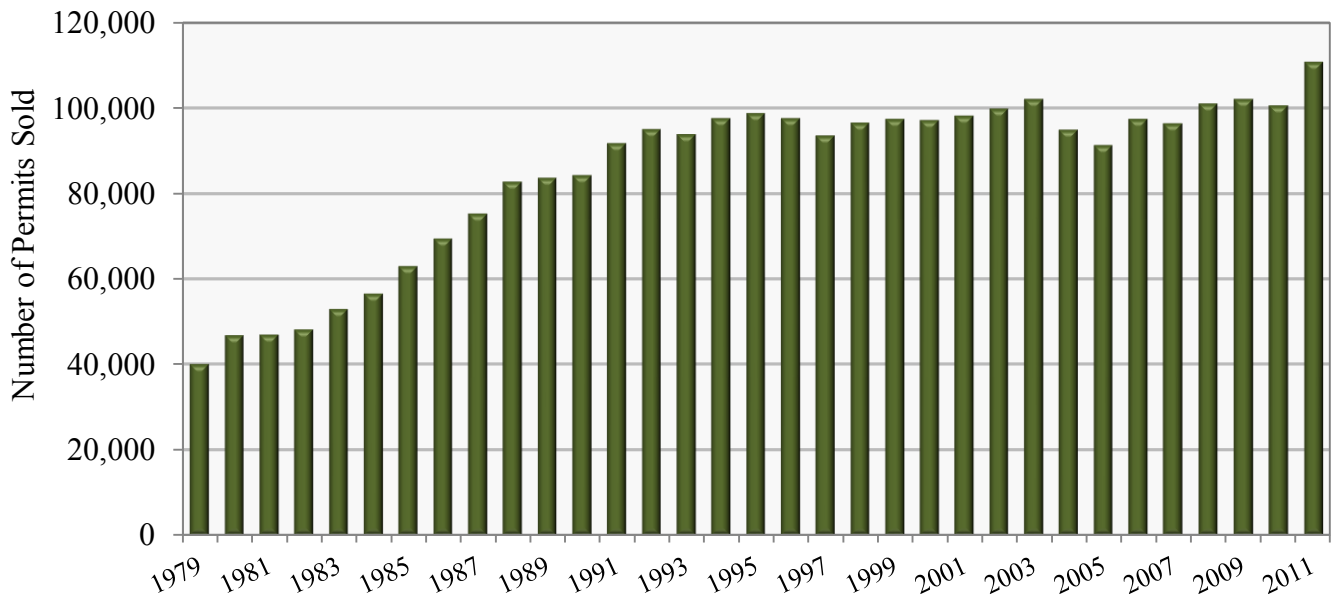


Figure 11. Missouri archery deer and turkey permit sales, 1979-2011. Permit sales do not include no-cost landowner permits. Prior to 1979, hunters purchased archery deer and archery turkey permits separately.

Table 6. Fall archery turkey harvest and permit sales^a in Missouri, 1975-2011.

Year	Fall Archery Harvest	% Change From Previous Year	Fall Archery Permit Sales ^a	% Change From Previous Year
1975 ^b	54	n/a	1,568	n/a
1976	46	-14.8	1,469	-6.3
1977	72	+56.5	1,701	+15.8
1978	108	+50.0	2,478	+45.7
1979 ^{c,d}	248	+129.6	39,830	+1,507.3
1980	406	+63.7	46,548	+16.9
1981	405	-0.2	46,776	+0.5
1982	349	-13.8	47,931	+2.5
1983	598	+71.3	52,666	+9.9
1984	488	-18.4	56,378	+7.0
1985	624	+27.9	62,731	+11.3
1986	454	-27.2	69,265	+10.4
1987	753	+65.9	75,064	+8.4
1988 ^e	770	+2.3	82,612	+10.1
1989	878	+14.0	83,440	+1.0
1990	812	-7.5	84,018	+0.7
1991	1,073	+32.1	91,656	+9.1
1992	1,071	-0.2	94,835	+3.5
1993	999	-6.7	93,729	-1.2
1994	1,604	+60.6	97,441	+4.0
1995 ^f	1,113	-30.6	98,601	+1.2
1996	1,357	+21.9	97,417	-1.2
1997	1,241	-8.5	93,402	-4.1
1998	1,670	+34.6	96,374	+3.2
1999	1,331	-20.3	97,345	+1.0
2000	1,340	+0.7	96,980	-0.4

^a Does not include no-cost landowner permits.

^b 1-month season with 1-bird bag limit.

^c Season expansion: October 1 – December 31.

^d Archery deer and turkey permits combined.

^e Bag limit increased to 2 turkeys.

^f Season expansion: October 1 – January 15.

Table 6. Continued.

Year	Fall Archery Harvest	% Change From Previous Year	Fall Archery Permit Sales ^a	% Change From Previous Year
2001	2,043	+52.5	97,966	+1.0
2002	2,272	+11.2	99,630	+1.7
2003 ^b	1,840	-19.0	102,012	+2.4
2004	2,333	+26.8	94,693	-7.2
2005	2,949	+26.4	91,152	-3.7
2006	2,823	-4.3	97,302	+6.7
2007	2,513	-11.0	96,204	-1.1
2008	2,484	-1.2	100,860	+4.8
2009	3,263	+31.4	101,930	+1.1
2010	2,184	-33.1	100,491	-1.4
2011	2,923	+33.8	110,647	+10.1

^b Season expansion: September 15 – January 15.

HUNTING INCIDENTS

There were 4 non-fatal hunting incidents that occurred during the 2012 spring turkey season.

RECENT REGULATION CHANGES

In 2010, nonresident youths were permitted to hunt during the spring youth turkey season. In addition, all mentors (including landowners hunting on their own land), mentoring a firearms hunter who was not hunter-education certified, must have been at least 18 years old and hunter-education certified unless they were born before January 1, 1967.

POPULATION INDEX – BOWHUNTER OBSERVATION SURVEY

Since 1983, MDC staff and citizen volunteers have recorded the number of wild turkeys, deer, and furbearers observed while bowhunting. Archers also record the number of hours that they bowhunt; therefore, an index of abundance can be calculated for each observed species. For wild turkeys, an index is reported as the number of turkeys observed per 1,000 hours bowhunting.

On a statewide basis, the number of turkeys observed per 1,000 hours bowhunting in 2011 was 445 (Figure 12). At the regional scale, the turkey observation index ranged from a low of 275 in the Mississippi Lowlands region to a high of 581 in the West Prairie region (Figure 1, Table 7). The statewide average of 445 represents a 30% increase from 2010 and a 4% increase from the previous 5-year average. The index remains 16% and 18% below the previous 10 and 20-year averages, respectively (Table 7).

Bowhunter Observation Survey - Index to Wild Turkey Abundance

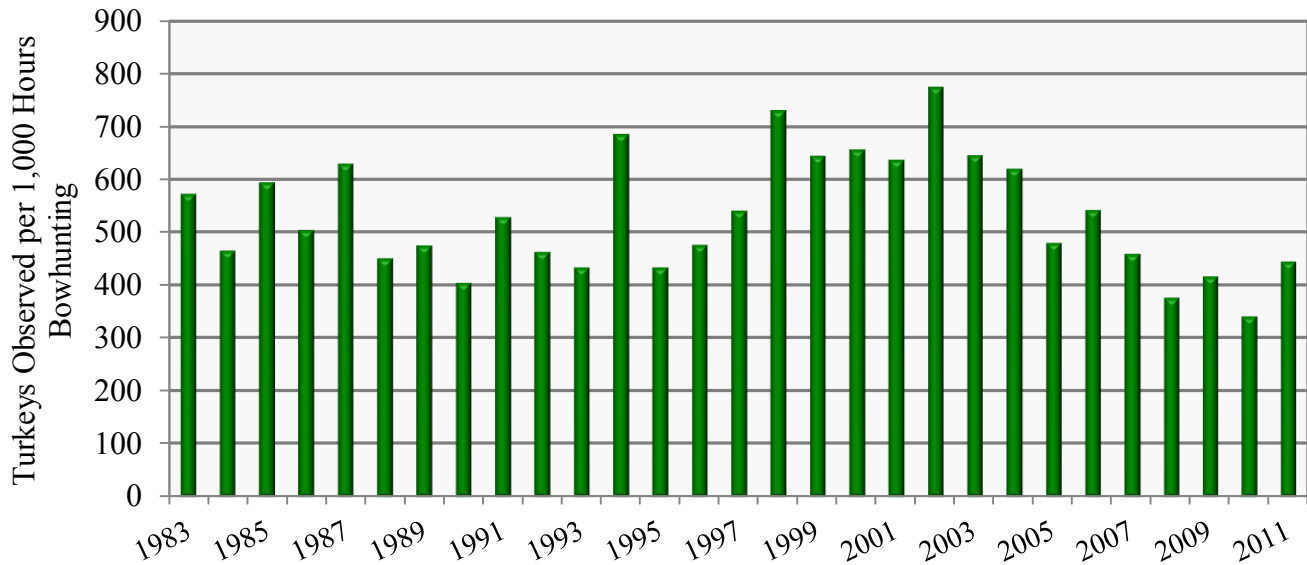


Figure 12. Statewide observations of wild turkeys by bowhunters in Missouri, 1983-2011. Data are the average number of turkeys observed per 1,000 hours bowhunting.

Table 7. Index of wild turkey abundance in Missouri by Turkey Productivity Region (Figure 1). Data were obtained from the bowhunter observation survey. Index values are the number of turkeys observed per 1,000 hours bowhunting. For each interval value, the % change indicates how the 2011 index compares to the previous year or the average for periodic intervals.

Productivity Region	2011 Index	1-year (2010) Change	5-year (2006-2010) Change	10-year (2001-2010) Change	20-year (1991-2010) Change
Lindley Breaks	370	+27%	+9%	-2%	-12%
Mississippi Lowlands	275	+25%	-33%	-18%	-5%
Northeast	577	+98%	+39%	-1%	-16%
Northwest	489	-19%	-25%	-39%	-37%
Ozark Border	413	+38%	+6%	-21%	-25%
Ozarks East	299	+86%	+12%	-12%	-4%
Ozarks West	309	+11%	-14%	-31%	-33%
Union Breaks	406	+21%	+1%	-10%	-10%
West Prairie	581	+12%	0%	-18%	-11%
Statewide	445	+30%	+4%	-16%	-18%



Wild Turkey Status Report

2012 Midwest Deer & Turkey Group Meeting
Custer State Park, South Dakota, 16-19 October

Dr. Jeffrey J. Lusk
Upland Game Program Manager

Population Assessment

The relative abundance of the wild turkey population in Nebraska is assessed each year with the three Rural Mail Carrier Surveys conducted in April, July, and October. Survey results are summarized by management zone (Figure 1). Result from the October survey were not available at the time of report preparation. The 2012 April Rural Mail Carrier Survey was conducted 2-4 April and resulted in 459 usable survey cards of 473 returned. Rural carriers made observations while traveling 185,407 miles along rural roads in 88 of Nebraska's 93 counties. Compared to results from the 2011 survey, statewide turkey indices were up by 3%. Regionally, there were declines in the Sandhills and Southeast regions, but increases in the Central, Northeast, and Panhandle regions (Table 1, Figure 2).

The 2012 July Rural Mail Carrier Survey was conducted during 2-6 July 2012 and resulted in 450 usable survey cards of the 480 returned. Rural carriers made observations while traveling 187,787 miles along rural roadways in 88 of Nebraska's 93 counties. Compared to results from 2011, turkey indices were mixed (Table 2, Figure 3). Indices were down slightly statewide, as well as regionally in the Central, Northeast, and Southwest regions.

Figure 1. Management zones for summarizing results from the Rural Mail Carrier Surveys.

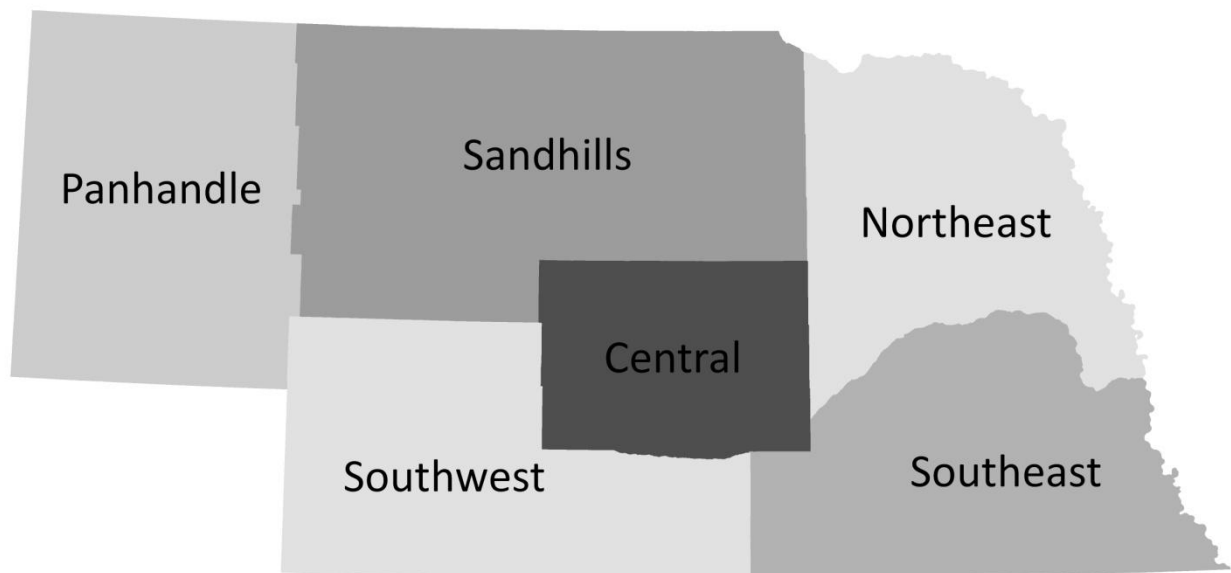


Table 1. Wild turkey indices from the 2012 April Rural Mail Carrier Survey by management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:		
		2011	Mean 2005-2011	Mean 2001-2011
Central	13.7 (8.69-18.8)	24	64	115
Northeast	2.82 (2.02-3.61)	11	10	34
Panhandle	2.60 (0.00-5.35)	87	54	105
Sandhills	11.1 (6.60-15.6)	-8	-11	21
Southeast	3.37 (2.76-3.97)	-6	-6	15
Southwest	15.9 (8.99-22.9)	8	34	84
Statewide	6.64 (5.37-7.91)	3	20	57

Figure 2. Regional and statewide time series (2000-2012) of wild turkey population indices from the April Rural Mail Carrier Survey by management region (Figure 1).

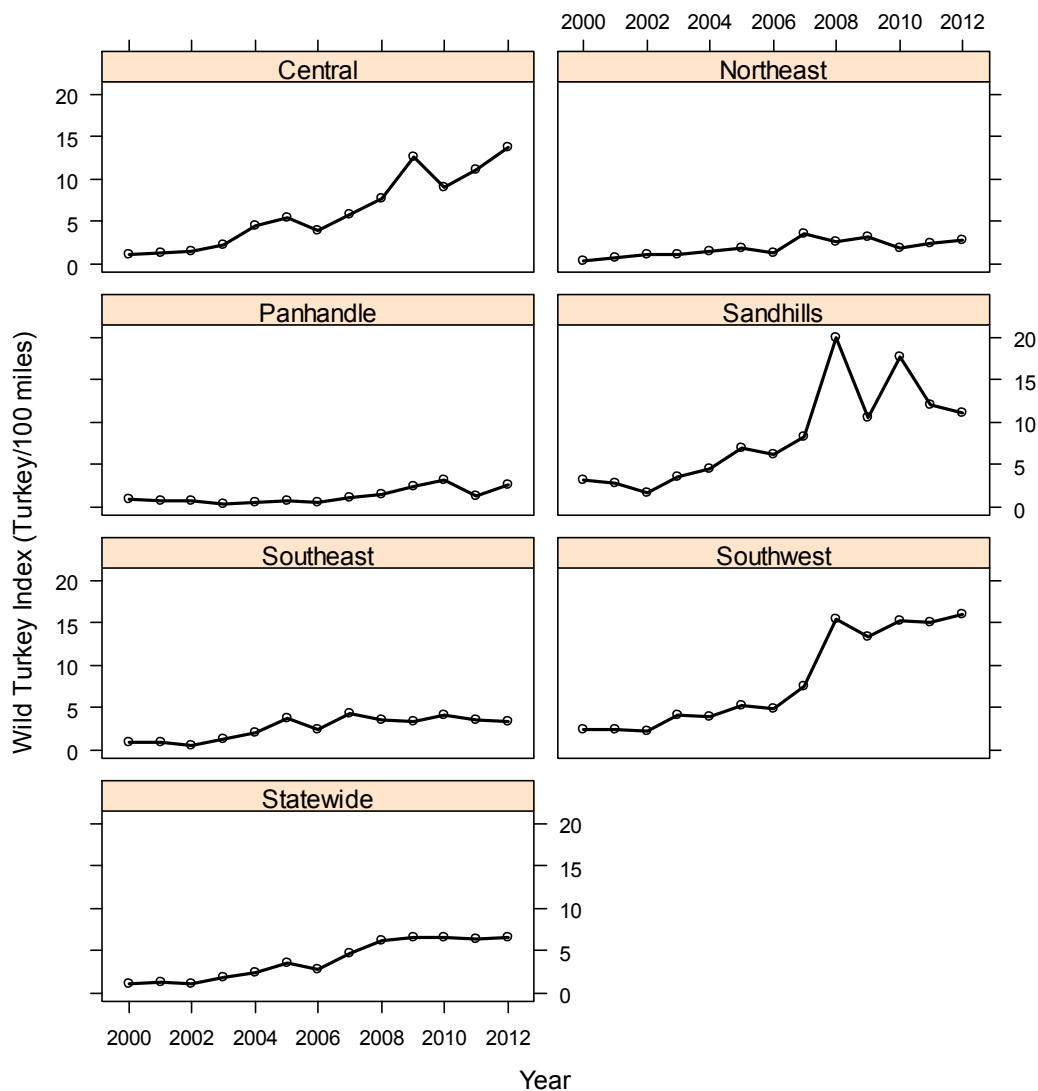
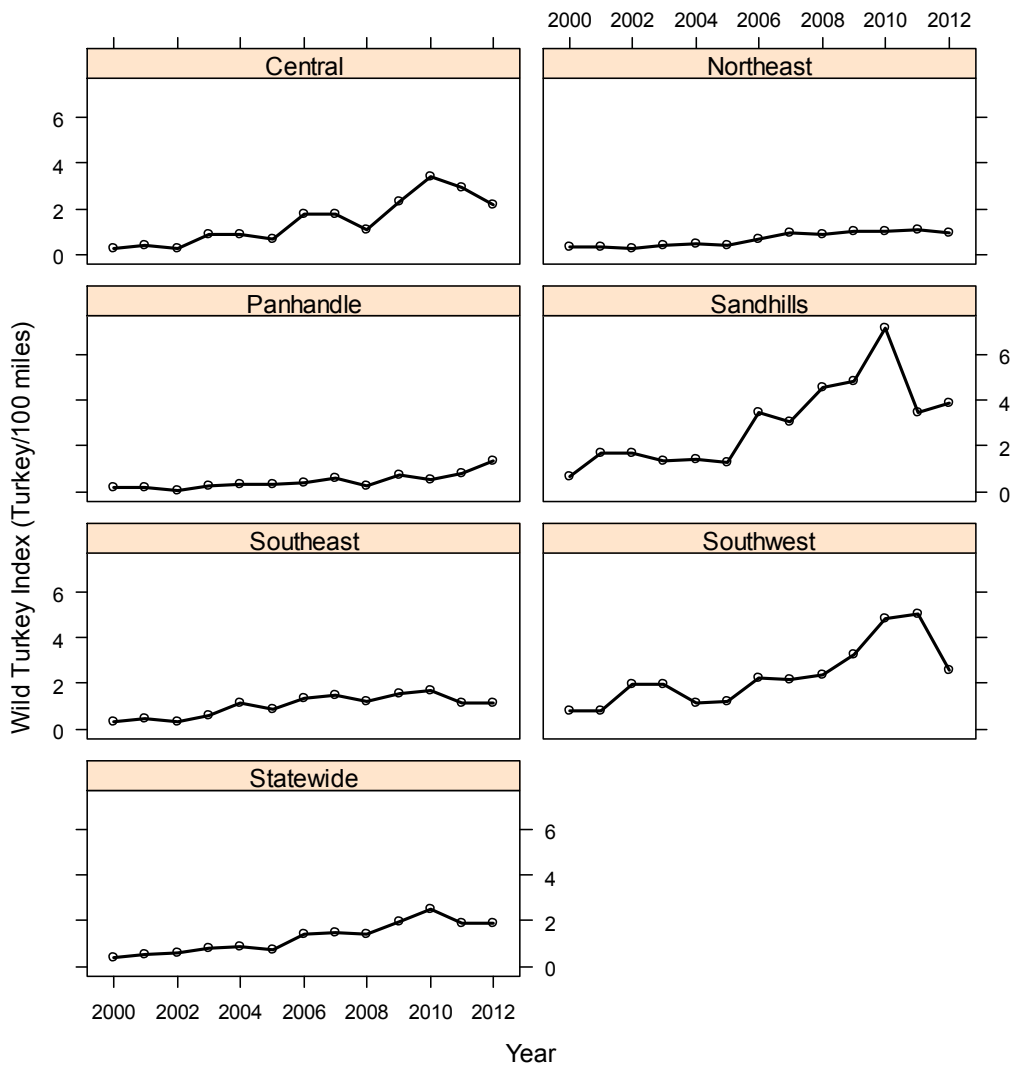


Table 2. Wild turkey indices by management region from the 2012 July Rural Mail Carrier Survey. Carrier means are weighted by miles traveled per carrier.

Region	Mean Turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:		
		2011	Mean 2007-2011	Mean 2002-2011
Central	2.17 (0.58-3.76)	-27	-6	36
Northeast	0.96 (0.55-1.37)	-11	-4	33
Panhandle	1.32 (0.38-2.27)	67	130	212
Sandhills	3.85 (0.84-6.86)	10	-17	19
Southeast	1.14 (0.81-1.47)	1	-19	1
Southwest	3.54 (1.65-3.43)	-50	-28	-3
Statewide	1.87 (1.47-2.27)	-3	2	38

Figure 3. Regional (Figure 1) and statewide time series (2000-2012) of wild turkey abundance indices from the July Rural Mail Carrier Survey.



Harvest Assessment

Fall 2011. The bag limit remained at two birds per permit with a limit of 2 permits per person, as occurred for the first time in 2007. A separate archery permit is no longer required to hunt with archery equipment; hunters may hunt with either shotgun or archery equipment during the fall season. The Commission extended the fall season through the end of January and taking effect fall 2012.

Permit sales decreased (-6.2%) from 12,241 in 2010, to 11,482 in 2011. The fall 2011 season was the second fall season that \$5.00 youth permits were available to hunters, and 20.7% of permit sales (2,375 permits) were youth permits. The season extended from 15 September through 31 December. The season was open during the November firearm deer season (12-20 November 2011), and hunters were required to wear at least 400 square inches of hunter orange on head, chest, and back during this time.

Harvest is assessed annually using an email survey sent to fall turkey permit holders who provided email addresses at the time of purchase. Among the 11,482 hunters purchasing turkey permits for the fall 2010 season, 6,109 provided valid email addresses. An invitation to participate in the survey was emailed to turkey hunters on 28 February 2012, and a follow-up email was sent on 7 March 2012. The survey was closed to participants on 22 March 2012, at which time 1,459 hunters had responded (23.9% raw response rate). The total number of permits represented by the respondents was 1,559 (25.5% permit response rate), and reported harvest was 1,141 (73.2% success rate). Total estimated harvest for the fall 2011 season was 8,405 turkeys (Tables 3& 4, Figure 4).

Table 3. Summary of the 2011 fall turkey hunter survey.

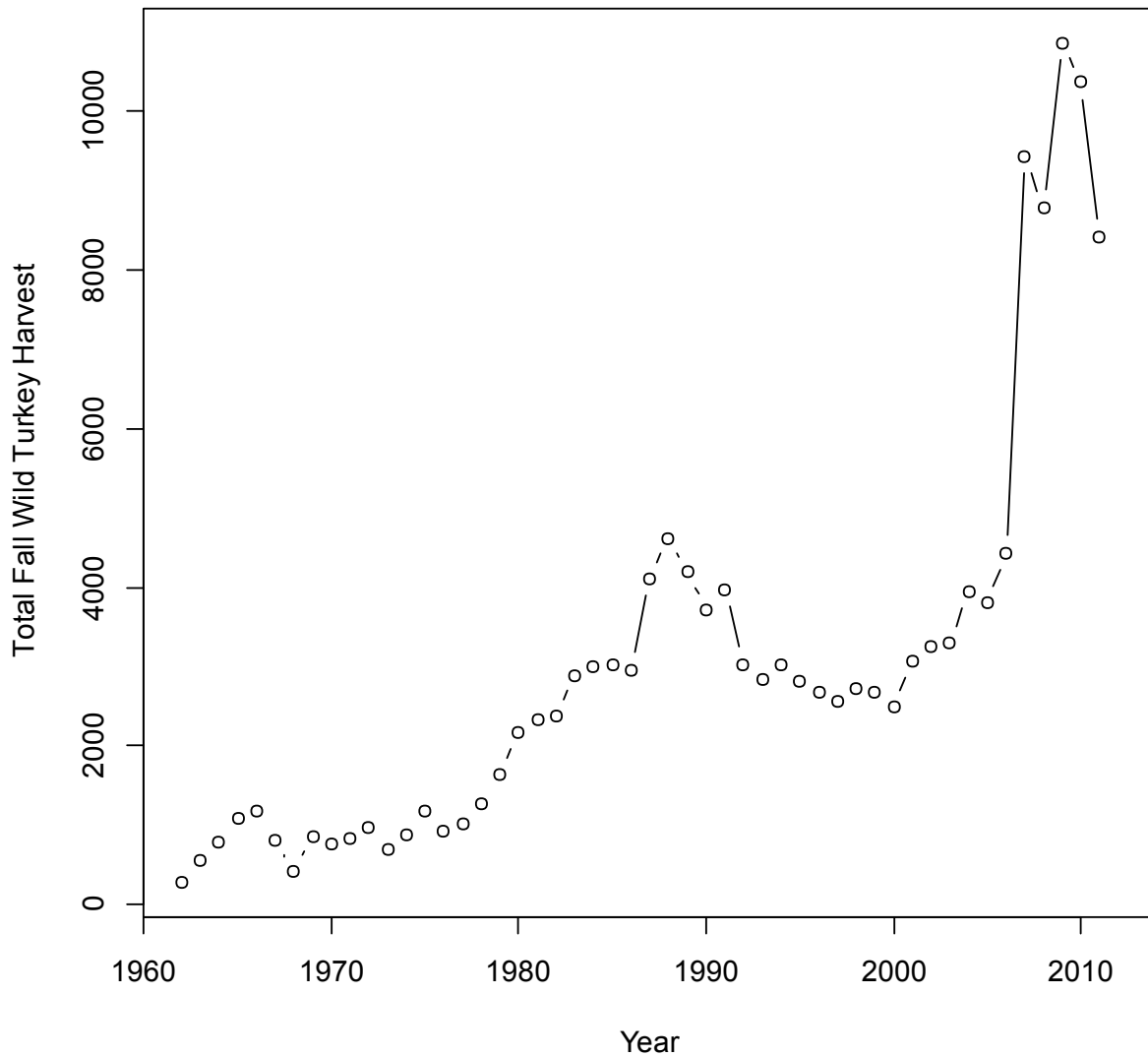
Type	Permits	Surveys		Returns*		Successful		Estimated Harvest
		Mailed	No.	%	No.	%		
Statewide	11,482	6,109	1,559	23.9	1,141	73.2	8,405	

Table 4. Historical (2003-2011) permit sales, harvest, and harvest success.

Type		Year								
		2003	2004	2005	2006	2007	2008	2009	2010	2011
Shotgun	Permits	6,030	7,199	7,415	8,373	10,784	9,855	12,738	12,241	11,482
	Harvest	3,076	3,691	3,565	4,092	8,857	8,236	10,853	10,356	8,405
	% Success	51	51	48	49	82	84	85.2*	84.6	73.2
Archery	Permits	1,041	1,125	1,022	1,269	1,499	1,480			
	Harvest	229	255	251	334	572	539			
	% Success	22	23	25	26	38	36			

* In 2009, permits were valid for both the archery and shotgun seasons, so results are reported in aggregate.

Figure 4. Long-term (1962-2011) total fall harvest (archery and shotgun).



Spring 2012. Spring bag limits remained at 1 male or bearded female turkey per permit with a limit of 3 permits per person. A separate archery permit is no longer required to hunt with archery equipment. Beginning in spring 2011, crossbows are now considered legal archery equipment for hunting resident wildlife in Nebraska.

Permit sales were lower (-3.3%) in 2012 (35,520 permits) compared to 2011 (36,726 permits). Spring 2012 was the third spring season for which \$5.00 youth permits were available to hunters, and 16.8% of permit sales (5,979 permits) were youth permits. Youth permit sales in 2012 decreased by 6.4% compared to spring 2011 sales. The youth archery and regular archery season ran between 25 March and 31 May 2012, youth shotgun season began 7 April through 31 May 2012, and the regular shotgun season ran from 14 April through 31 May.

Harvest is assessed annually using an email survey sent to spring turkey permit holders who provided email addresses at the time of purchase. Among the 36,726 hunters who purchased turkey permits for the spring 2012 season, 20,949 provided email addresses, of which 16,281 were valid. An invitation to participate in the survey was emailed to prospective participants on 23 June 2012 and a follow-up email was sent on 9 July 2012. The survey was closed to participants on 25 July 2012, at which time we had received 4,288 responses (26.3% raw response rate). These respondent provided harvest and satisfaction information related to 6,177 permits (37.9% permit response rate). Harvest reported by respondents was 3,907 (63.3% success rate). Total estimated harvest for the spring 2012 season was 21,419 turkeys (Tables 5 & 6, Figure 5).

Table 5. Summary of the 2012 spring turkey hunter survey.

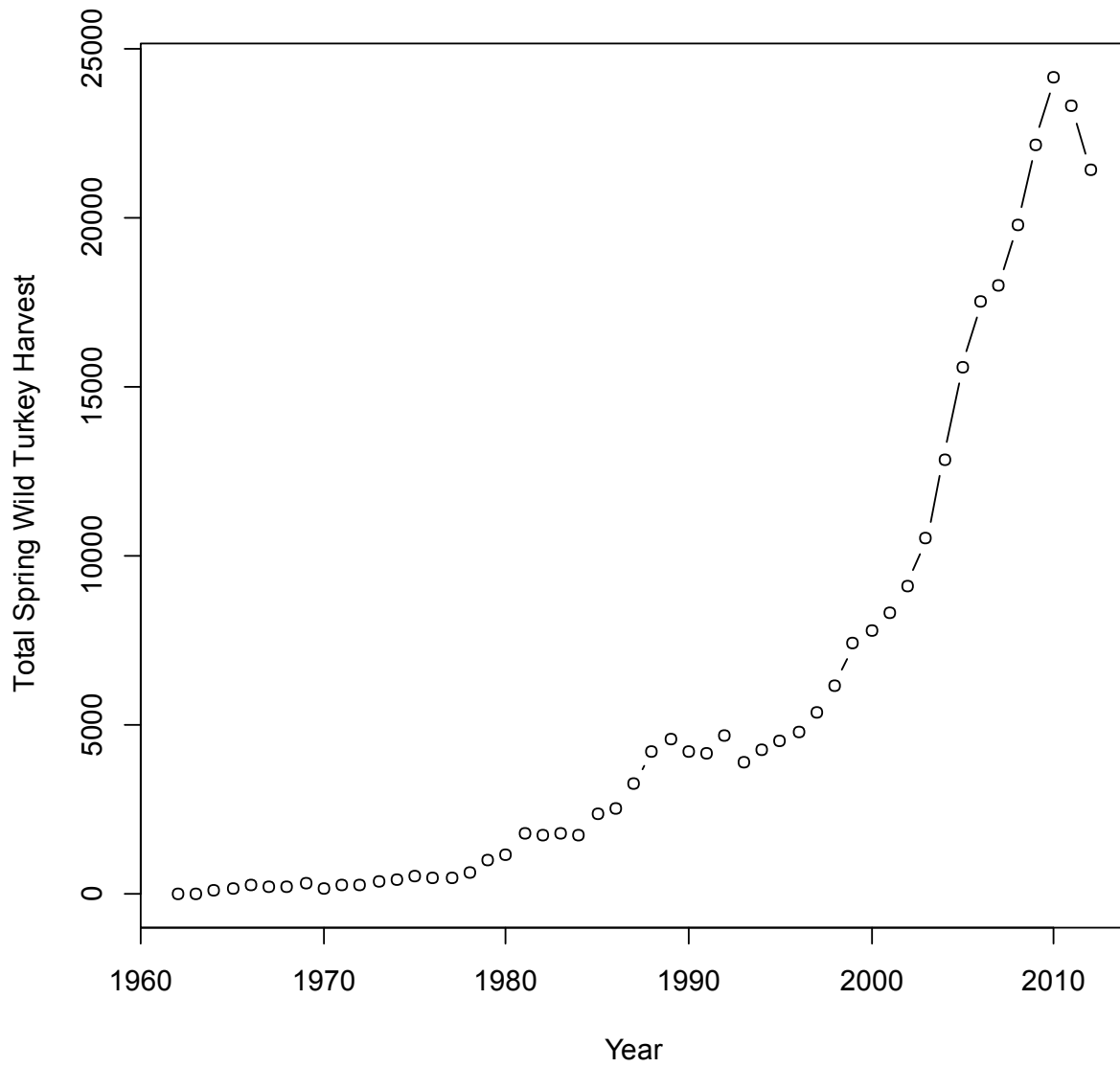
Unit	Permits Sold	Mailings	Permits Reported		Reported Harvest	Estimated Harvest	Harvest Success
			No.	%			
Youth	5,979		664	11.1	273	2,535	42.4%
Regular	29,541		5,513	18.7	3,634	18,884	65.9%
Total	35,520	16,281	6,177	17.4	3,907	21,419	63.3%

Table 6. Historical (2005-2012) permit sales, harvest, and harvest success.

Type	Statistic	Year							
		2005	2006	2007	2008	2009	2010*	2011	2012
Archery	Permits	5,349	5,902	6,830	6,792	7637			
	Harvest	2,340	2,424	2,601	2,888	3,688			
	Success	44%	41%	38%	43%	48%			
Shotgun/ Regular	Permits	21,707	22,716	25,432	24,650	24,880	30,693	30,341	25,520
	Harvest	11,641	12,636	14,270	15,333	17,009	21,270	20,237	18,884
	Success	54%	56%	56%	62%	68%	69.3%	66.7%	65.9%
Youth	Permits	1,525	1,394	1,490	2,480	2,776	6,210	6,385	5,979
	Harvest	801	750	1,130	1,548	1,485	2,912	3,065	2,535
	Success	53%	54%	76%	62%	53%	46.9%	48.0%	42.4%

* Starting in 2010 a separate archery permit was no longer required and the regular permit was valid with appropriate weapon during both seasons.

Figure 5. Long-term (1962-2012) spring total turkey harvest (archery, youth, regular).



MIDWEST DEER/TURKEY STUDY GROUP MEETING

Blue Bell Lodge
Custer State Park, SD
October 16 - 19, 2012

NORTH DAKOTA WILD TURKEY REPORT

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

POPULATION ESTIMATES, 2012

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 annually record observations of wild turkey hens, broods and poults on standardized pheasant brood routes during July and August. Collecting incidental turkey brood data (Figure 2) by our field staff was re-initiated after a couple years of no effort.

Results of the 2012 statewide brood survey showed number of turkeys, number of broods, and young per adult hen to be all up from 2011 but still down over the past five years (Table 1). Broods per 100 miles were up 200% statewide and total number of birds per 100 miles up 138% from 2011. Average brood size was 8.07 poults per adult hen, up 82% from 2011. Age ratio was 0.80 poults per adult. 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. Our 2011 winter landowner survey of turkeys showed numbers to be up about 7% from 2010. However, many landowners in the western part of the state are still reporting low turkey numbers and very few poults. Turkey production has been rather poor the last three years, especially in western one-third of the state primarily due to cool, wet springs, causing poor nesting success and poor young survival.

FALL HUNTING SEASON, 2011

The state is divided into twenty-two hunting units and these areas include all of North Dakota's 53 counties (Figure 3). During the fall of 2011, twenty of 22 counties were open for wild turkey hunting. Unit 53 in the northwestern part of the state and unit 21 in the southwest were closed. These two units have been closed for the past three fall hunting seasons because of low turkey numbers.

Licenses are issued by weighted lottery after gratis licenses are deducted from the total available. Only North Dakota residents are eligible to apply in the first lottery. If licenses remain after the first lottery, then nonresidents can apply.

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, muzzle loading rifles, handguns and bow/arrows. During the fall of 2011, the season was held from October 8, 2011 through January 8, 2012. There were 4,630 permits available and 4,708 were issued (350 gratis and 4,358 general permits). This was a decrease of 1,125 permits available (-19 percent) over 2010.

From the wild turkey questionnaire, it was determined that 3,145 license holders (66.8 percent) hunted during the fall. Hunters harvested 1,259 wild turkeys for a success of 40 percent. A summary of the fall hunting statistics for ND since 1958 can be found in Table 2. Figure 4 is a graph of fall harvest statistics from 1980 – 2011. 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 218 harvested birds, 40 percent of the 2011 fall harvest were females; 60 percent males, and 42 percent were juveniles; 58 percent adults.

SPRING 2012 HUNTING SEASON

Similar to fall turkey hunting, 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 2012, the entire state was open for wild turkey hunting except for unit 21 in the southwestern part of the state. This area has been closed for the past four spring hunting seasons because of low turkey numbers in this unit.

Licenses are issued by weighted lottery after the number of gratis licenses is deducted from the total available. Only residents are eligible to apply for spring licenses, although one spring license is provided to the NWTf for auction.

First time spring turkey hunters age 15 or younger can receive one spring license valid for the regular hunting season for a specific unit. We provide only a one time period for hunting wild turkeys in the fall, and you can choose your weapon from shotguns, muzzle loading rifles, handguns and bow/arrows.

The season opened April 14 and closed May 20 (36 days). Only bearded wild turkeys were legal to be harvested. A total of 5,359 applicants (down 19 percent from 2011) were received for the 5,795 permits (down 13.7 percent from 2011) that were available. This included 272 gratis, 153 youth and 6,625 general permits.

Data from the spring hunter harvest questionnaire showed that 4,586 of the license holders (78%) hunted. Hunters harvested 2,115 wild gobblers (up 24 percent from 2011) for a hunter success of 46 percent (Table 3, Figure 5).

FALL HUNTING SEASON, 2012

For the 2012 fall hunting season, there are 4,145 permits available, 485 less than during fall 2011. 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 13 and close on January 13, 2012 (100 days). This is the same season length as in the past several years. 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 twelfth year that the entire state will be open to wild turkey hunting.

TRAP/TRANSPLANT PROGRAM

During the 2011-2012 wild turkey trapping period, 80 wild turkeys were trapped at three locations. One location was in the east-central portion of the state and the other two in the southwest. The trapped turkeys were released at wildlife management areas in the vicinity of the trapping. Of the total birds trapped and released, the age ratio was 25A:25J and the sex ratio was 34M:46F. The drop-net was used in both trapping operations. All birds were of the Eastern subspecies.

PRESENT RESEARCH (Josh Courlas – Univ. Of Wisconsin)

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 have initiated a research project with Dr. Scott Lutz at the Univ. of Wisconsin – Madison to evaluate our population sampling techniques plus try a gobbler survey to see which technique works the best in our habitat. The student is on board now, took course work last fall and began his field work this spring. A summary of his work to date is noted below.

“During September we focused on completing the FRAGSTATS analysis of landscape within each of our sample townships to generate statistics that will be incorporated into occupancy models. These occupancy models will be generated over the next week and a half using the program PRESENCE. Using FRAGSTATS I quantified the landscape composition and landscape patterns of townships within their respective ecoregions. By examining the FRAGSTATS landscape data I will be able to investigate relationships between Landscape and turkey abundance and occupancy at a more detailed level.

Potential parameters that will be used for the occupancy models include contrast weighted edge density, mean patch size, patch density, and nearest neighbor distance. Contrast weighted edge density is a measure of edge density that will allow us to compare landscapes of different sizes. Mean patch size measures the average patch size of each class within a township. Patch density is the number of

patches per square kilometer. Nearest neighbor distance measures the average distance between the nearest same class patch.

Average statistics for each ecoregion are summed up in Table 1. Contrast weighted edge density has also been calculated but is not yet included in the table. I have also constructed figures to display occupancy and abundance index values for each township within ecoregions.

During the month of October I plan to incorporate these landscape metrics as co-variates in occupancy models. This analysis will help me understand the relationship between turkey occupancy and landscape features. I also plan to post a technician position announcement by the end of October.

After I understand current turkey abundance and landscape relationships, my goal is to make predictions about future turkey occupancy in North Dakota. I am also exploring additional statistical and graphical methods for displaying current turkey distribution patterns given the field data collected in 2012. My goal is to produce probability contours that represent areas of high, moderate, and low probabilities of turkey occupancy and abundance.”

Table 1. Values of cover pattern and distribution parameters determined by FRAGSTATS for each of the 4 Ecoregions in North Dakota.

	Cover Parameters					
Ecoregion	Forest MPS (ha)	Forest NUMP	Forest PSCOV	Forest CA (ha)	Forest ED (m/ha)	Forest MNN (m)
Missouri Plateau	4.348	285.074	343.147	1321.257	54.311	132.66
Drift Prairie	7.677	109.391	323.311	800.605	23.250	201.36
Red River Valley	4.577	111.500	240.433	579.055	17.236	213.21
Turtle Mountain	18.145	157.818	455.436	2825.558	54.349	128.07

The Statistics represent average forest class parameters for the townships sampled within each ecoregion. (MPS: Mean Patch Size, NUMP: Number of Patches, PSCOV: Patch size coefficient of variance, CA: Class Area, ED: Edge Density, MNN: Mean Nearest Neighbor)

Research Activities:

Currently there is one research study being conducted through SDSU. Dustin Toy is being advised by Kent Jensen and thesis title is: "Gobbler Mortality in Wyoming". Also, results of recent research studies can be obtained here:

1) SURVIVAL OF MALE MERRIAM'S WILD TURKEYS IN THE NORTHERN BLACK HILLS OF SOUTH DAKOTA – Thomas Berdan

<http://www.sdstate.edu/wfs/publications/thesis/loader.cfm?csModule=security/getfile&PageID=823013>

2) Survival of Male Merriam's Turkeys in the Wyoming Black Hills – Samuel J. Cahoy

<http://www.sdstate.edu/wfs/publications/thesis/loader.cfm?csModule=security/getfile&PageID=453115>

TURKEY SEASON RESULTS, FALL 2011

Waterloo Wildlife Research Station
Athens, Ohio 45701

A total of 1,375 wild turkeys, 4% less than in 2010, was harvested in 48 counties during the 2011 Ohio fall wild turkey season (Table 1; Fig.1). An 8% reduction in fall turkey permit sales as well as several years of poor brood production may have contributed to a lower fall turkey harvest in 2011. However, fall turkey harvests have remained low and permit sales have generally declined since the record harvest of 2002 except for a modest increase in harvest and permit sales associated with an expanded fall season in 2008 (Table 2).

Ashtabula County had the highest reported fall harvest in 2011 ($n = 67$), followed by Knox ($n = 55$), Guernsey ($n = 53$), Tuscarawas ($n = 53$), and Noble ($n = 49$) counties. The top 5 counties collectively accounted for 20% of the 2011 fall turkey harvest.

As in most years, adult females ($n = 553$) comprised 40% of the harvest, followed by adult males ($n = 420$, 31%), juvenile females ($n = 254$, 18%), and juvenile males ($n = 148$, 11%).

The majority of turkeys were harvested on private land (91%), and 38% of the harvest was checked by landowners. Most successful hunters used a shotgun (71%), but 16% of hunters used crossbows and 12% used vertical bows to harvest a fall turkey.

The fall turkey harvest was well distributed throughout the entire 7-week season with 10% of turkeys harvested during opening weekend, 16% harvested during the first week, and 10 – 14% harvested during each of the remaining 6 weeks of the season.

Fall turkey permit sales ($n = 6,291$) decreased 8% from 2010 sales and were 59% below the record fall turkey permit sales of 2002. Youth fall turkey permit sales ($n = 911$) and resident reduced-cost senior fall turkey permit sales ($n = 862$) both declined by only 1%. Resident free senior fall turkey permits ($n = 9,616$) declined (-13%) for the eighth consecutive year.

Success rates of fall turkey permit holders were lower in 2011 (9.7%) than in 2010 (12.1%). However, success rates for youth fall turkey permits (9.0% vs. 5.7%), resident reduced cost senior permits (9.2% vs. 3.9%), and resident free senior fall turkey permits (0.8% vs. 0.3%) were all higher in 2011 than in the 2010 season. Note that success rates are likely conservative because participation rates for each permit type are unknown.

It is unclear why fall turkey hunting success rates have been relatively low as compared to spring turkey hunting success in Ohio. Furthermore, the number of licensed fall turkey hunters is far fewer than the number of spring turkey hunters. Fall turkey hunting in Ohio may be ancillary to archery hunting for deer or other small game hunting seasons. Hunters may be harvesting turkeys when the opportunity is presented, but not actively seeking turkeys in the fall.

Table 1. Fall 2011 either-sex wild turkey harvest in 48 Ohio counties and comparisons with 2010 and 2009.

County	Sex and age of turkeys harvested, 2011				Total harvest		
	Adult male	Adult female	Juvenile male	Juvenile female	2011	2010	2009
Adams	10	16	5	4	35	29	73
Ashland	8	5	1	3	17	38	28
Ashtabula	15	28	10	14	67	77	124
Athens	8	12	5	2	27	18	45
Belmont	12	13	3	4	32	11	26
Brown	6	13	2	5	26	28	59
Carroll	12	13	8	5	38	28	45
Clermont	13	14	3	2	32	44	56
Columbiana	13	12	2	10	37	35	48
Coshocton	14	16	2	12	44	68	77
Cuyahoga	0	0	0	0	0	2	1
Defiance	4	8	1	0	13	25	56
Gallia	8	11	6	11	36	34	59
Geauga	9	13	4	5	31	53	79
Guernsey	14	26	5	8	53	39	74
Harrison	9	16	4	9	38	34	57
Highland	14	11	1	11	37	51	53
Hocking	7	9	1	3	20	17	61
Holmes	9	17	5	11	42	29	40
Jackson	3	9	0	5	17	22	63
Jefferson	9	4	2	5	20	25	31
Knox	25	24	1	5	55	62	63
Lake	2	3	2	0	7	4	18
Lawrence	8	9	1	3	21	16	41
Licking	13	18	5	4	40	53	62
Lorain	7	10	7	5	29	15	38
Mahoning	11	6	1	6	24	27	34
Medina	9	7	0	1	17	24	25
Meigs	3	5	0	7	15	33	48
Monroe	13	18	5	9	45	15	44
Morgan	5	9	4	5	23	20	34
Morrow	2	5	2	2	11	13	18
Muskingum	8	16	3	9	36	32	25
Noble	15	14	5	15	49	34	36
Perry	5	10	5	6	26	25	61
Pike	6	6	6	3	21	10	28
Portage	6	8	4	1	19	23	47
Richland	14	12	7	6	39	31	37
Ross	8	8	1	2	19	32	53
Scioto	10	10	1	1	22	12	37
Stark	10	8	2	3	23	19	31
Summit	0	0	2	1	3	8	8
Trumbull	9	13	3	7	32	60	78
Tuscarawas	11	30	6	6	53	56	86
Vinton	6	9	1	5	21	19	42
Washington	7	9	3	5	24	25	48
Wayne	4	3	0	2	9	8	5
Williams	5	14	3	5	27	22	33
Totals	420	553	148	254	1,375	1,425	2,255

Table 2. Summary of Ohio's fall wild turkey hunting seasons, 1996-2011.

Year	Counties open	Bag limit	Permits sold ^a	Total harvest
1996	22	1	10,050	1,250
1997	22	1	8,240	1,210
1998	22	1	4,804	1,234
1999	25	1	7,008	3,071
2000	28	1	9,861	2,428
2001	32	1	13,447	3,331
2002	35	1	15,469	2,394
2003	36	1	10,989	2,060
2004	36	1	8,455	1,808
2005	37	1	8,000	1,339
2006	37	1	7,422	1,175
2007	37	1	6,847	1,216
2008	46	1	9,223	2,139
2009	48	1	9,536	2,255
2010	48	1	8,594	1,425
2011	48	1	8,064	1,375

^aTotal includes fall turkey permits, fall turkey youth permits, and fall turkey reduced cost senior permits, but not fall turkey free senior permits.

TURKEY SEASON RESULTS, SPRING 2012Waterloo Wildlife Research Station
Athens, OH 45701

In 2012, 17,657 gobblers were harvested during the Ohio spring wild turkey season, a decline of 3% compared to 2011 (Table 1). The total was composed of 1,632 turkeys harvested during the 2-day youth spring wild turkey season on April 21 and 22 (+11%), and 16,025 turkeys harvested during the 4-week spring wild turkey season open from April 23 through May 20 (-4%). Wild turkey abundance was expected to be similar in 2012 than in the previous year as the statewide reproductive index in 2011 was below average for the third consecutive year.

Ashtabula County, with a reported harvest of 762 gobblers, ranked first in the State in the 2012 spring turkey season (Fig. 1). Rounding out the top 5 counties were Tuscarawas ($n = 531$), Guernsey ($n = 495$), Coshocton ($n = 492$), and Muskingum ($n = 489$) counties. Compared to the 2011 spring turkey season, the 2012 harvest increased in 37 counties, decreased in 49 counties, and remained the same in 2 counties (Table 1).

Based off spur measurements reported by hunters, the spring turkey harvest was composed of 77% adult gobblers and only 23% jakes. Most hunters reported harvesting a turkey on private land (90.5%); only 9.5% reported harvesting a gobbler on public land. Landowners reported a harvest of 3,723 gobblers representing 21% of the statewide total harvest.

Seventy-nine percent of the spring turkey harvest occurred during the first half of the 2012 season; 9.2% of the harvest occurred in the 2-day youth season while 50.4%, 19.4%, 12.1%, and 8.8% of the harvest occurred during the first, second, third, and fourth weeks of the spring turkey season, respectively. A slightly lower percentage of the harvest may have occurred during the final 2 weeks of the season than in previous years due to the advanced stage of vegetation associated with record high spring temperatures. A similar percentage of turkeys (22%) were harvested during the afternoon hours in the final 2 weeks of the season in 2012 as in 2011 (20%) and 2010 (25%), the first two years in which spring turkey hunting hours were extended from 12:00 pm until sunset.

Licensed hunters purchased 45,245 spring turkey permits, 9,942 youth spring turkey permits, 3,749 senior reduced-cost spring turkey permits, and 10,016 senior free spring turkey permits. The 68,952 spring turkey permits sold in 2012 was a decline of 8% below the 2011 spring turkey permit sales (Table 2). However, hunting success rates were slightly higher for all spring turkey permit types in 2012. Success rates were 23.4% for spring turkey permits, 22.2% for youth spring turkey permits, 17.6% for senior reduced-cost spring turkey permits, and 4.2% for senior free spring turkey permits. These success rates may be conservative (especially for the senior free spring turkey permits) because participation rates may be <100%.

Table 1. Spring turkey harvest in 2011, 2012, and the percent change in the harvest in 88 Ohio counties.

County	2011	2012	% Change	County	2011	2012	% Change
Adams	502	420	-16	Licking	425	380	-11
Allen	45	45	0	Logan	159	166	4
Ashland	224	238	6	Lorain	182	177	-3
Ashtabula	700	762	9	Lucas	43	46	7
Athens	367	335	-9	Madison	4	1	-75
Auglaize	36	34	-6	Mahoning	226	238	5
Belmont	435	456	5	Marion	53	49	-8
Brown	428	350	-18	Medina	116	120	3
Butler	200	184	-8	Meigs	396	366	-8
Carroll	349	385	10	Mercer	17	20	18
Champaign	87	87	0	Miami	26	12	-54
Clark	17	18	6	Monroe	440	418	-5
Clermont	420	338	-20	Montgomery	15	20	33
Clinton	75	60	-20	Morgan	338	292	-14
Columbiana	394	410	4	Morrow	205	212	3
Coshocton	443	492	11	Muskingum	455	489	7
Crawford	85	77	-9	Noble	305	333	9
Cuyahoga	4	2	-50	Ottawa	2	9	350
Darke	43	52	21	Paulding	82	99	21
Defiance	227	218	-4	Perry	257	247	-4
Delaware	131	126	-4	Pickaway	28	26	-7
Erie	52	60	15	Pike	270	280	4
Fairfield	90	111	23	Portage	224	234	4
Fayette	5	6	20	Preble	71	91	28
Franklin	23	21	-9	Putnam	58	51	-12
Fulton	90	92	2	Richland	408	393	-4
Gallia	370	289	-22	Ross	344	333	-3
Geauga	300	276	-8	Sandusky	17	13	-24
Greene	23	20	-13	Scioto	260	210	-19
Guernsey	498	495	-1	Seneca	162	165	2
Hamilton	139	119	-14	Shelby	39	42	8
Hancock	31	23	-26	Stark	219	213	-3
Hardin	74	88	19	Summit	28	42	50
Harrison	474	451	-5	Trumbull	405	428	6
Henry	35	32	-9	Tuscarawas	571	531	-7
Highland	438	402	-8	Union	37	38	3
Hocking	283	296	5	Van Wert	21	11	-48
Holmes	215	259	20	Vinton	256	263	3
Huron	158	152	-4	Warren	123	90	-27
Jackson	296	293	-1	Washington	402	390	-3
Jefferson	374	365	-2	Wayne	107	97	-9
Knox	498	451	-9	Williams	242	261	8
Lake	58	84	45	Wood	21	19	-10
Lawrence	262	179	-32	Wyandot	105	88	-16
				Total	18,162	17,657	-3

Table 2. Ohio's spring turkey season dates, permits sold, and harvest, 1966-2012.

Year	Season Dates	Open Counties	Bag Limit	Permit Fee	Permits Sold ^a	Total Harvest ^b
1966	05/04 – 05/07	9	1	Free	500	12
1967	05/03 – 05/06	9	1	Free	898	18
1968	05/08 – 05/11	9	1	Free	914	20
1969	05/07 – 05/10	9	1	Free	945	37
1970	04/29 – 05/02	14	1	Free	909	30
	05/06 – 05/09				896	36
1971	04/28 – 05/01	14	1	Free	1,000	37
	05/05 – 05/08				1,000	17
1972	05/03 – 05/06	14	1	\$5.35	917	32
	05/10 – 05/13				881	25
1973	05/02 – 05/05	14	1	\$5.35	1,034	39
	05/09 – 05/12				1,034	32
1974	05/01 – 05/04	14	1	\$10.50	999	61
	05/08 – 05/11				184	10
1975	04/28 – 05/03	14	1	\$10.50	996	75
	05/05 – 05/10				267	19
1976	04/26 – 05/08	14	1	\$10.50	1,471	139
1977	05/02 – 05/14	14	1	\$10.50	1,751	137
1978	05/01 – 05/13	18	1	\$10.50	2,000	147
1979	04/30 – 05/12	18	1	\$10.50	2,000	265
1980	04/21 – 05/03	20	1	\$10.75	2,097	387
1981	04/27 – 05/09	20	1	\$10.75	3,458	577
1982	04/26 – 05/08	20	1	\$10.75	4,262	651
1983	04/25 – 05/07	21	1	\$10.75	5,141	764
1984	04/23 – 05/12	31	1	\$10.75	6,935	1,233
1985	04/22 – 05/11	31	1	\$10.75	10,084	1,583
1986	04/28 – 05/17	31	1	\$10.75	11,913	1,816
1987	04/27 – 05/16	32	1	\$10.75	13,396	2,268
1988	04/25 – 05/14	32	1	\$11.00	16,208	2,629
1989	04/24 – 05/13	36	1	\$11.00	18,887	3,171
1990	04/23 – 05/12	37	1	\$16.00	19,613	4,096
1991	04/22 – 05/11	38	1	\$16.00	22,898	5,009
1992	04/27 – 05/16	38	1	\$16.00	28,974	5,678
1993	04/26 – 05/15	42	1	\$16.00	29,538	7,470
			2	\$32.00	4,106	
1994	04/25 – 05/14	44	1	\$16.00	29,334	9,098
			2	\$32.00	5,187	
1995	04/24 – 05/13	44	1	\$20.00	30,837	10,892
			2	\$40.00	6,136	
1996	04/22 – 05/11	46	1	\$20.00	31,003	12,098
			2	\$40.00	7,700	
1997	04/28 – 05/17	47	1	\$20.00	30,511	12,393
			2	\$40.00	8,130	
1998	04/27 – 05/16	50	1	\$20.00	31,037	13,251
			2	\$40.00	8,133	
1999	04/26 – 05/16	57	1	\$20.00	42,363	14,419
			2	\$40.00	7,846	

2000	04/24 – 05/14	88	1	\$20.00	49,982	20,276
Table 2. Continued.						
Year	Season Dates	Open Counties	Bag Limit	Permit Fee	Permits Sold ^a	Total Harvest ^b
			2	\$40.00	9,720	20,276
2001	04/23 – 05/13	88	1	\$20.00	54,841	26,156
			2	\$40.00	11,092	
2002	04/22 – 05/19	88	1	\$20.00	48,821	22,190
			2	\$40.00	24,633	
2003 ^c	04/28 – 05/25	88	2	\$20.00	94,989	20,368
2004	04/26 – 05/23	88	2	\$24.00	74,119	16,927
2005	04/18 – 05/15	88	2	\$24.00	85,053	18,833
2006	04/24 – 05/21	88	2	\$24.00	85,248	20,023
2007	04/23 – 05/20	88	2	\$24.00	75,408	18,584
2008	04/21 – 05/18	88	2	\$24.00	79,962	20,389
2009	04/20 – 05/17	88	2	\$24.00	81,049	20,710
2010	04/19 – 05/16	88	2	\$24.00	78,388	23,421
2011	04/18 – 05/15	88	2	\$24.00	74,957	18,162
2012	04/23 – 05/20	88	2	\$24.00	68,952	17,657
^a Includes youth and senior spring turkey permits (Ohio residents 66 years of age and older). ^b Total recorded harvest by all hunter types (paid, youth, senior, and exempt). ^c The special bonus wild turkey permit was eliminated in 2003 and hunters no longer could be classified as 1-bird or 2-bird permit holders.						

2012 Wild Turkey Program Status Report



Photo courtesy of Rick Stankiewicz

2012 Spring Turkey Hunt

Ontario's 2012 spring turkey hunt ran from April 25 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 hour before sunrise to 7:00 pm. Only bearded birds can be harvested.

Reported spring turkey harvest in 2012 was 8,079 birds, down from 8,560 in spring 2011 and the fourth consecutive year of decline in reported harvest. Sightings of turkeys by deer hunters remain stable in most management units and do not mirror the declines in reported turkey harvest. Twenty-eight percent of males harvested in spring 2012 were jakes.

A 2012 turkey licence in Ontario costs \$27.49 and turkey hunters must also have a small game licence which costs \$23.46 for residents and \$112.46 for non-residents. In 2012 Ontario modernized its hunting and fishing licence sales with an automated service that allowed purchases online, by telephone and over the counter. Some hunters expressed concerns about the new system. While spring turkey licence sales declined in 2012 it is unclear how much if any of the decline can be attributed to the new licencing system.

Ontario requires all individuals wishing to hunt turkeys to take the Ontario Wild Turkey Hunter Education Course and pass a written exam. In previous years hunters had to take

this course and complete the exam in person. In 2011 Ontario produced a turkey hunter education course DVD that allows hunters to take the course at their leisure and complete the proctored exam in person or by Skype.

2012 Fall Turkey Hunt

Ontario's fall turkey season begins the day after Canada's Thanksgiving Day (October 9, 2012) and runs for 13 days. Hunters may purchase one fall licence/seal, hunt in any open WMU, and harvest one turkey of either-sex.

Hunter interest in Ontario's fall turkey hunt remains much lower than the spring hunt, in part due to the number of other hunting options in mid-October (e.g. moose, bear, archery deer, small game, and waterfowl). The preliminary fall 2012 harvest in Ontario was 266 birds, and 58% of the harvested birds were hens. Approximately 3,900 licenses were sold for the 2012 fall season, a slight increase from fall 2011.

Management Challenges

- Lack of compliance with mandatory reporting
- Apparent population declines in some areas
- Agricultural conflicts
- Reports of turkeys with lesions (poxvirus) in new areas
- Optimal spatial scale at which to manage wild turkeys

South Dakota Game, Fish, and Parks
2012 WILD TURKEY STATUS REPORT

Population Status

Three subspecies (eastern, Rio Grande, and Merriam’s turkeys) occur in the state at varying levels. Eastern turkeys are most common in the eastern riparian/cropland habitats. Rio Grande turkeys occur in smaller populations in eastern and south-central South Dakota. Merriam’s turkeys primarily occur west of the Missouri River in prairie riparian and ponderosa pine habitats. In 2011, South Dakota Game, Fish, and Parks sold a total of 26,002 turkey hunting licenses (Fig. 1). The wild turkey harvest has dipped slightly (Fig. 2, 3, 4). South Dakota Department of Game, Fish, and Parks do not have a current estimate of turkey populations in the state but are working on some population models.

Fig. 1. Number of turkey licenses sold for the state of South Dakota from 1985-2011.

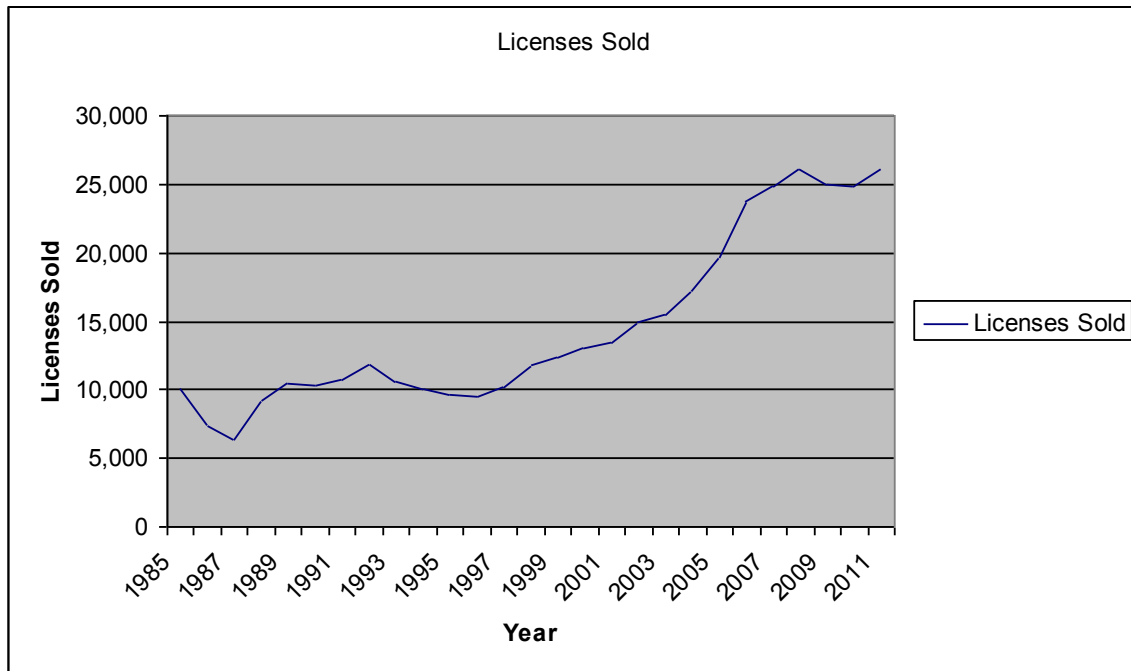


Fig. 2. State turkey harvest projections for South Dakota from 1995-2011.

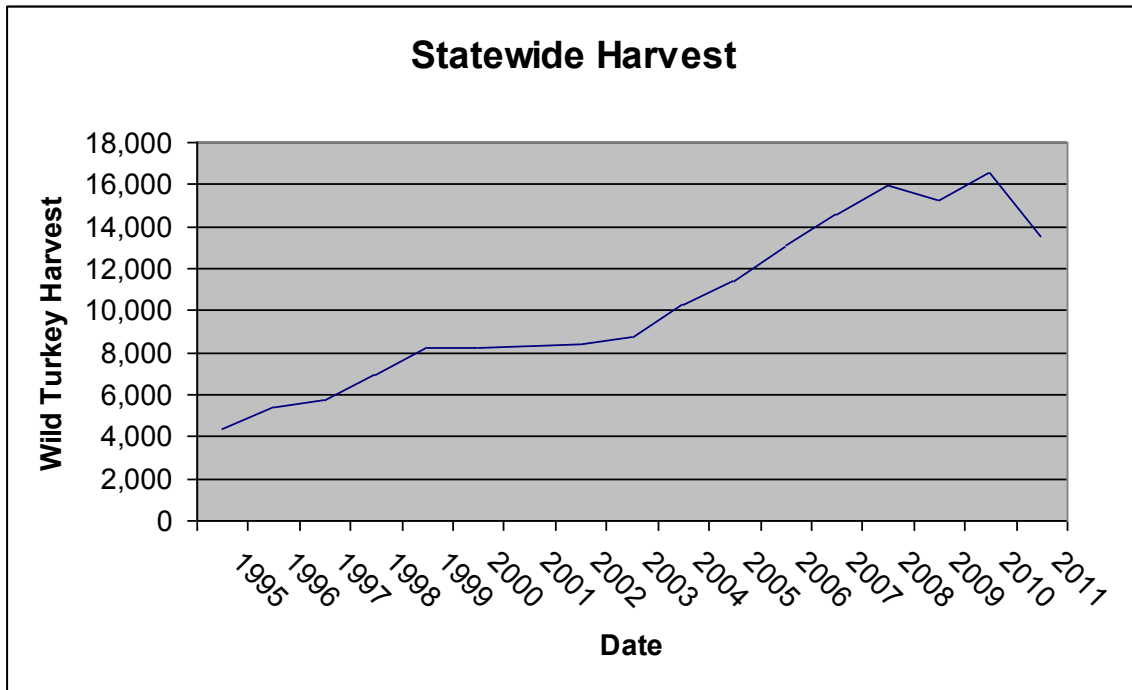


Fig. 3. Black Hills spring harvest projections from 1985-2012.

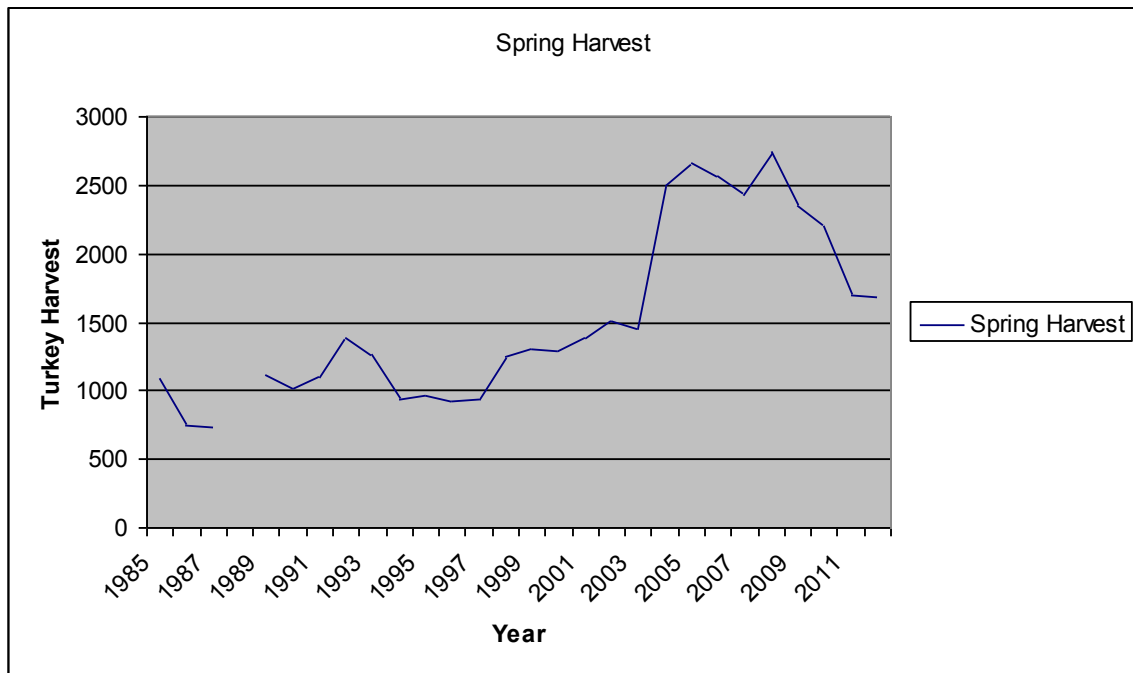
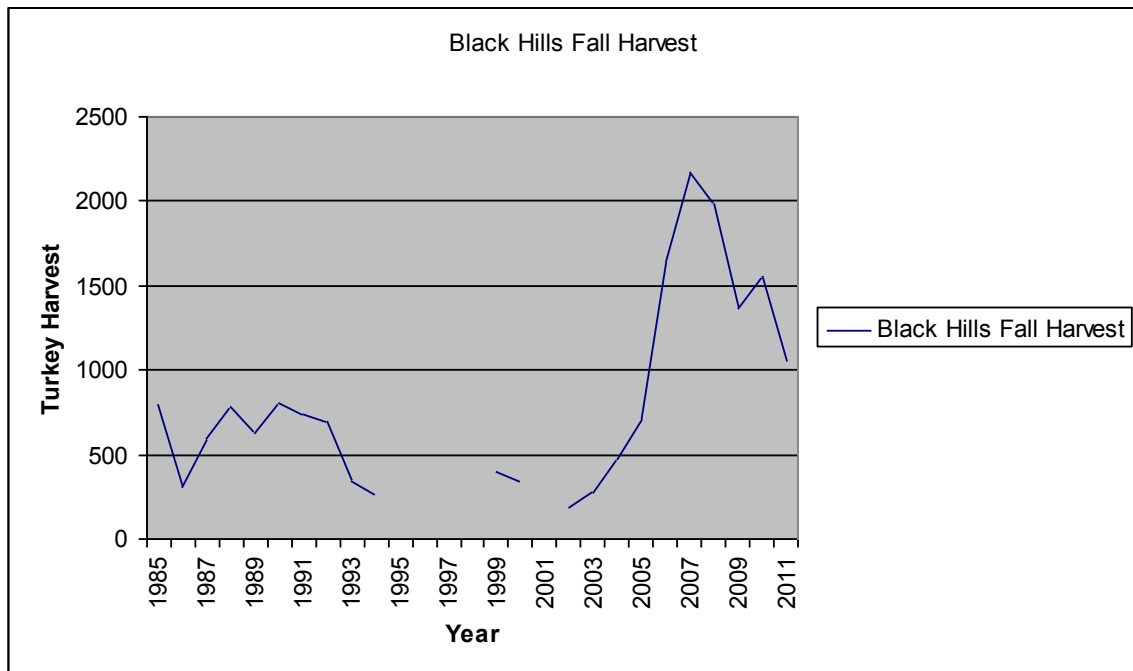


Fig. 4. Black Hills fall harvest projections from 1985-2011.



Wisconsin Department of Natural Resources 2012 Wild Turkey Status Report

by Krista McGinley & Scott Walter, Wisconsin DNR Upland Program

Historical Overview of Wild Turkeys in Wisconsin DNR

Schorger (1942), through an exhaustive review of pioneer journals and early newspaper articles, suggested that wild turkeys were common in Wisconsin prior to settlement only southeast of a line connecting Green Bay and Prairie du Chien, with the highest numbers being found in the southwestern part of the state. The northern limit for turkeys during this period likely fluctuated in response to severe winter weather, and re-establishment of turkeys in the state following severe winters was believed to occur via immigration from adjacent populations in Illinois.

Turkeys were found throughout the prairie and oak savanna habitat that typified much of southern Wisconsin prior to settlement, but some early reports suggest that, locally, turkeys were tied to areas with standing timber (Schorger 1942), which likely provided winter food and roost sites. The removal of vast areas of timber from southern Wisconsin that took place concurrent with the conversion to intensive agriculture, high harvests supported by active markets for wildlife, and the disappearance of source populations in Illinois led to turkeys becoming rare in Wisconsin by 1860. Wild turkeys were considered entirely extirpated from the state by the late 19th century, with the last known turkey being harvested near Darlington in 1881. Given the dramatic landscape changes that led to the loss of turkeys from Wisconsin and adjacent states, Schorger (1942) predicted that “it is doubtful if a planting will ever become successful in Wisconsin.”

Indeed, the wild turkey remained largely absent from Wisconsin’s landscape for much of the next century, although numerous early restocking efforts were attempted. It seemed that Schorger’s cynical view of the future for wild turkeys in Wisconsin was warranted, and that successful restoration of turkeys was unlikely. Biologists learned from these early efforts, however, that a successful restoration effort would require the use of truly wild birds, not the game farm or semi-domestic turkeys typical of early releases. Research into wild turkey ecology had also provided an increased understanding of turkey habitat needs. With this new information in hand in the early 1970s, Wisconsin was set to join other states on the path toward turkey restoration.

An agreement between the Wisconsin DNR and the Missouri Department of Conservation paved the way for the successful restoration of wild turkeys to Wisconsin. Missouri, with a healthy wild turkey population, was interested in bolstering their flagging ruffed grouse population via translocation. Both agencies realized that a cooperative venture, whereby Wisconsin provided ruffed grouse in exchange for wild-captured Missouri turkeys, would be mutually beneficial and help to address the conservation goals for both species. In January 1976, 29 turkeys were released in the Bad Axe River watershed in Vernon County, and a total of 334 Missouri wild turkeys were released at various sites in southwestern Wisconsin over the following 9 years. Birds released were Eastern wild turkeys (*Meleagris gallopavo silvestris*), the largest of the 5 subspecies found in North America and likely the subspecies best adapted to the climatic conditions found in Wisconsin. These wild birds also proved to possess the survival skills lacking in the pen-reared or semi-domestic birds used in previous restocking efforts and benefited from mild winter weather and good production during the early years of translocation. As a result, turkeys began to increase in number in areas near the initial release sites.

To hasten expansion, the WDNR initiated intrastate translocation efforts in 1979, moving birds from established populations in southwestern Wisconsin and releasing them at suitable sites throughout the southern two-thirds of the state. These “trap and transfer” efforts to expand the range and increase numbers of turkeys in Wisconsin were initially hindered by staff inexperience with capture techniques, relatively little staff time allocated to the project, and a reliance on internal funding mechanisms (small game and deer license revenue and federal dollars allocated through the Pittman-Robertson Federal Aid in Wildlife Restoration Act). Given these constraints, only 300 turkeys were translocated within Wisconsin during the first 6 years of the project.

The National Wild Turkey Federation (NWTf) provided the solution for more rapid turkey restoration efforts in Wisconsin, and across the country, through their “Target 2000” program. Via this creative approach, NWTf staff developed partnerships with many state natural resource agencies to facilitate the interstate shipment of turkeys for restoration purposes. States providing turkeys to others were reimbursed at a standard rate of \$500 per turkey. Wisconsin, with an already established and healthy turkey flock in the southwestern part of the state, was able to provide turkeys to other states that were initiating their own turkey restoration efforts. Nearly 1,400 turkeys were shipped to Michigan, Minnesota, North Carolina, Kentucky, Texas, and Louisiana over the next decade. Moreover, staff had acquired significant experience with turkey capture techniques during the initial years of our intrastate translocation program, such that the cost to capture and transport turkeys was often less than \$500/bird. Net funding received through the Target 2000 program was reinvested in Wisconsin’s turkey program by updating trapping equipment and supporting greater staff investment in the trap-and-transfer efforts. By 1993, a total of 3,385 turkeys had been translocated to 164 release sites in 49 Wisconsin counties.

The Driftless Area of southwest Wisconsin was selected as the general area for initial stocking because it possesses key habitat elements believed at the time to be critical for the establishment of a turkey population. To insure the highest probability of successful restoration, specific release sites within this area were selected based on stringent criteria. To receive Missouri turkeys, areas were to have significant oak-hickory forest cover, south facing slopes, and spring seeps embedded in an agricultural matrix that provided open areas for spring breeding activities and brood-rearing habitat, and waste grains as a winter food source. This strategy proved very successful, as turkey numbers continued to climb throughout the region even as turkeys were being trapped for out-of-state shipment and to support intrastate restoration efforts.

While site-specific habitat factors are important in determining the success of release efforts, on a broad scale it was recognized that climate would ultimately determine the northern range limit of turkeys in Wisconsin. Wild turkeys face increased metabolic demands when temperatures drop below 50o F, and persistent deep snow inhibits their movements. As such, early release sites were confined to the southern two-thirds of the state, where 12” of snow persisted for no more than 30 days in an average winter. To the surprise of many, however, wild turkeys proved much better able to tolerate the habitat and climatic conditions typical of more northerly portions of the state. The successful establishment of turkeys at sites along this snow band eventually led to releases in more northerly counties. The 2004 release of 164 turkeys at 6 release sites in Douglas and Bayfield counties introduced turkeys to the far northern reaches of Wisconsin, and brought the restoration phase of Wisconsin’s turkey management program to a close. In total, at least 3,843 turkeys were captured, translocated, and released at 183 sites across Wisconsin.

Currently, wild turkeys are found in all Wisconsin counties, and both spring and fall seasons are open state-wide. The restoration of wild turkeys therefore stands as one of the greatest success stories in the history of wildlife management in Wisconsin. From complete absence to a healthy state-wide population in 30 years, wild turkey restoration efforts in the state provide a classic example of how effectively wildlife research and management efforts can mesh, but also reveal how partnerships among dedicated conservation organizations can lead to landscape-level benefits to our wildlife community and the human users that enjoy it.

Harvest Management

As turkeys expanded their range across Wisconsin, Turkey Management Zones (TMZs) were established so that harvest could be regulated in accordance with turkey population status and habitat suitability in specific areas. The first modern spring wild turkey season was held in 1983 in 4 southwestern Wisconsin zones, and by 2006 turkey hunting was available statewide. Forty-six individual TMZs were eventually created, along with 17 state park units and a federally-managed season at Fort McCoy. The numerous zones allowed managers a fine-grained approach to harvest management and also early initiation of turkey hunting in areas that could support harvest. As permits were issued by zone, however, the smaller zones limited hunter ability to explore and hunt new locations.

As turkey populations became well established across the state, hunters expressed interest in greater flexibility with respect to hunting location, and managers realized that turkey habitat quality was homogenous across regions, on a scale greater than that captured by the current 46-zone system. As a result, the 46 zones were consolidated into 7 larger TMZs in 2006. These larger zones allow hunters much greater mobility with respect to hunting location, yet still allow managers to monitor turkey populations and regulate harvest in accordance with regional assessments of turkey numbers and habitat quality.

The first modern spring turkey season in Wisconsin took place in 1983, and included three separate 5-day time periods, with the first time period commencing on the Wednesday nearest April 13th. Over the ensuing quarter century, turkeys and turkey hunting expanded across the state, three additional time periods were added, and the time periods were lengthened to 7 days. The first statewide spring season took place in 2006.

During the inaugural spring season in 1983, 182 turkeys were harvested by 1,200 hunters in 4 southwestern zones- a permit success rate of 15%. Statewide harvest increased rapidly over the following quarter century as turkeys expanded their range and new zones were opened to turkey hunting. Spring harvest peaked at 52,880 turkeys in 2008, and then declined 24% by 2011, when 40,133 birds were registered. While this decline was likely in part due to a recent shallow decline in permit sales, it also probably reflected impacts of wet spring and harsh winter weather during this 3-year period on turkey populations across the state. Harvest increased by 6% during the spring 2012 season, on the heels of a very mild winter and with good hunting conditions during the season.

2007 marked the first year that Wisconsin youth were able to participate in an annual Spring Turkey Youth Hunt. The hunt is designed to give youth hunters ages 10-15 an opportunity to hunt turkey and gain valuable experience at a time when other hunters are not authorized to hunt turkeys. Starting in 2010 for the Spring Turkey Youth Hunt, youth hunters 10-15 years of age, with or without Hunter Education certification, are eligible to participate with a mentor. In 2012, the Youth Hunt took place on April 7th & 8th, the Saturday and Sunday immediately prior to the opening of the regular spring turkey

hunting season. Youth hunters harvested a total of 2,928 turkeys during this weekend, a 16% increase over the harvest from 2011's youth hunt. An additional 136 birds were harvested during Learn to Hunt Turkey events.

Either-sex fall hunting seasons have the potential to impact turkey population size, if hen harvest is excessive. Hence, the initial fall seasons were also designed to result in a conservative harvest. The first fall turkey season was held in 1989, with three 5-day time periods (Wednesday – Sunday) in several southwestern zones. As turkeys continued to increase in number and expand their range in Wisconsin, fall seasons were opened in new zones- generally a few years after the establishment of a spring hunt. In 1994, the fall hunt was expanded into a single, 28-day season, and additional days were added in 2005 and 2007, when the opening date was set to coincide with the opening of bow deer and many small game seasons. An experimental late-season hunt in Zones 1-5, from the Monday following the traditional 9-day gun deer hunt through the end of December, was initiated in 2009 and made permanent in 2011. The use of dogs to hunt fall turkeys was also introduced as a limited pilot program in 2007 and made legal statewide in 2010. Considering the 6 spring time periods and the extended fall season in zones 1-5, Wisconsin now offers turkey hunting opportunities >135 days each year!

Statewide harvest during the fall season increased from the 1,570 turkeys registered during the first season in 1989 to a peak of 12,554 in 2003. Harvest remained high (>10,000) and fairly stable from 1999 through 2008, but has since tapered off significantly, dropping to only 5,433 turkeys in 2011. This was the lowest fall harvest since 1994, when fall turkey hunting was still confined largely to the southern half of the state. The dramatic reduction in fall harvest may partially reflect a declining turkey population from 2008-2011, but declining hunter participation in the fall hunt is certainly a driving factor. The total number of permits issued for the fall season declined steeply over this time frame; the number of permits issued in 2011 was 36% lower than the number issued as recently as 2005. As well, hunters who purchase a fall permit may be less dedicated to pursuing turkeys than during previous years. Fall Turkey Hunter Survey data from 2006-2011 reveal that nearly one-third of individuals that purchase fall turkey permits do not hunt turkeys. As well, an increasing percentage of respondents suggest that they hunt turkeys only “opportunistically while pursuing other game” during the fall; this percentage increased from ~10% in 2006 to ~30% from 2009-2011.

Spring turkey harvest in Wisconsin, 1983 – 2012

Year	Permits Issued	Harvest	Success Rate
1983	1,200	182	15.17%
1984	1,950	303	15.54%
1985	2,025	496	24.49%
1986	2,675	793	21.58%
1987	6,040	1,478	24.47%
1988	11,070	2,486	22.46%
1989	21,280	4,400	20.68%
1990	29,877	6,465	21.64%
1991	37,414	6,846	18.30%
1992	43,925	8,798	20.03%
1993	61,767	12,316	19.94%
1994	71,420	12,637	17.69%
1995	68,588	15,323	22.34%
1996	75,812	18,000	23.74%

1997	92,734	20,992	22.64%
1998	101,141	28,338	28.02%
1999	112,256	33,168	29.55%
2000	132,318	38,686	29.24%
2001	151,522	39,211	25.88%
2002	160,101	39,336	24.57%
2003	169,277	42,970	25.38%
2004	189,908	47,477	25.00%
2005	193,826	46,183	23.83%
2006	200,869	46,662	23.23%
2007	205,306	52,428	25.54%
2008	208,972	52,880	25.30%
2009	218,133	52,581	24.11%
2010	214,356	47,722	22.26%
2011	210,384	40,133	19.08%
2012	201,984	42,612	21.1%

Fall turkey harvest in Wisconsin, 1989 – 2012

Year	Permits Issued	Harvest	Success Rate
1989	7,260	1,521	20.95%
1990	12,465	3,266	26.20%
1991	16,668	2,878	17.27%
1992	24,997	4,983	19.93%
1993	31,449	5,502	17.49%
1994	17,889	3,896	21.78%
1995	28,555	6,172	21.61%
1996	30,554	6,305	20.64%
1997	32,569	6,004	18.43%
1998	40,750	8,843	21.70%
1999	55,479	10,802	19.47%
2000	69,556	11,263	16.19%
2001	71,601	11,029	15.40%
2002	75,040	10,860	14.47%
2003	78,831	12,554	15.93%
2004	78,900	10,216	12.95%
2005	85,678	10,591	12.36%
2006	78,782	12,033	15.27%
2007	80,382	12,010	14.94%
2008	76,448	10,693	13.99%
2009	68,814	8,028	11.67%
2010	61,567	7,394	12.01%
2011	54,949	5,523	10.10%

**as of the morning of 10/29/2012, fall harvest was at 3,961 birds*

Summary of Recent Turkey Hunting Incidents

Fall 2011: There was a single hunting incident during the fall 2011 wild turkey hunting season. The incident was fatal, and occurred when the shooter/victim (a 71-year-old male without Hunter Safety certification) was hunting in a red pine plantation. He was found lying on his back with a shotgun wound to his neck.

Spring 2012: There were three hunting incidents during the spring 2012 wild turkey hunting season. Of these, one was fatal, and occurred when the shooter/victim (a 52-year-old female and a graduate of Hunter Safety Education) was hunting from a makeshift hunting blind. Cause of death was a shotgun blast to the head. The two non-fatal incidents both occurred when the shooter, in the same hunting party as the victim, mistook the victim for a turkey.

Results of the 2012 Spring Turkey Hunter Questionnaire

A sample of hunter names and addresses were randomly drawn from the current spring turkey hunter permit file. A survey was mailed to ≈10,000 spring turkey hunters after the completion of the spring turkey season. The questionnaire was mailed in proportion to the number of permits distributed in each zone. The questionnaire asked each hunter specific questions about their spring turkey hunting experience. A second mailing was made to 5,000 of the non-respondents. Data from all returned questionnaires were summarized using the Statistical Analysis System (SAS).

A total of 3,536 spring turkey hunter surveys were returned. After duplicates were removed, the resulting response rate was 35%. The proportion of respondents who applied with landowner preference for this spring's turkey hunt permit was 18.1%. Statewide, 29.2% of the respondents have 0-5 years of spring turkey hunting experience and 22.3% have 16+ years of experience.

Most spring turkey hunters are "Very Satisfied" (40.4%) or "Somewhat satisfied" (21.3%) with the current spring turkey hunting season framework of 6, 7-day time period, 7 zones, a limited draw for first permits, and over-the-counter sale of unissued permits. Only 13% of hunters are either "Somewhat dissatisfied" or "Very dissatisfied".

Statewide, 13.5% of survey respondents participated in the Youth Turkey Hunt as a youth or chaperone; of those, 21.9% reported a turkey being harvested.

Twenty-four percent of the respondents had attended a turkey hunter education clinic sponsored by the WDNR or the National Wild Turkey Federation. All surveyed hunters were asked who introduced them to turkey hunting; 38.7% introduced themselves, while 32.0% were introduced by a friend.

Statewide, 89.4% of the respondents hunted turkeys this spring. Of those who did not hunt, 39.5% bought a 2012 Wild Turkey Stamp. The success rate for active hunters who received a harvest permit was 34.5%. This success rate may be high because of response and prestige biases of a mail survey. The spring turkey harvest registration data success rate (19.1%) is uncorrected for non-hunters and is probably a low estimate.

Surveyed hunters were asked how difficult it was to find a place to hunt in the spring of 2012, and 87.5% of the respondents said it was "very easy" or "somewhat easy". Spring turkey hunters were also asked to report the days on which they hunted. Hunting pressure was relatively constant Wednesday through

Sunday, with the most pressure on Saturday. The new additional days, Monday and Tuesday, had the least hunting pressure. Hunters averaged 3.2 days afield perusing turkeys.

Statewide, the mean number of gobblers/jakes seen by hunters was 3.6; the mean number of gobblers/jakes heard by hunters was 4.9; the mean number of hens seen was 5.6, and the mean number of hens heard was 3.3. Most respondents that had a shot at a turkey did not shoot at the first turkey which presented an opportunity; 84.9% reported waiting for a better shot, or for an adult gobbler. Of the respondents that harvested a turkey, 32.4% with one tag harvested one turkey; 43.0% with two tags harvested one turkey, and 9.2% harvested two turkeys; 32.0% with three or more tags harvested one turkey, 23.2% harvested two turkeys, and 14.4% harvested three or more turkeys. Most successful hunters (69.4%) harvested their turkeys between sunrise and noon. Surveyed hunters were asked if they hit any turkeys that they were unable to retrieve; 4.8% were unable to find their bird, 101 hunters reported hitting one turkey, and 4 hunters reported hitting 2 or more turkeys. Ninety-five percent of turkey hunters used a gun "most" while hunting, while a gun was used 97.2% of the time to kill a turkey.

The percent of time turkey hunters spent on private land varied by TMZ from 53.6% in TMZ 7 to 89.1% in TMZ 4. Of the hunters on private land, 78.6% obtain access by either owning the land, hunting on a family member or relative's land, or hunting a friend or neighbor's land. Nineteen percent (18.8%) of hunters responded to "other hunters kept me from hunting where I wanted to" with "definitely yes" or "somewhat." Similarly, sixteen percent (16.1%) of respondents answered "there was too much competition from other hunters where I hunted" with "definitely yes" or "somewhat." Only 12.1% of the respondents indicated that other hunters interfered with their chance to bag a bird.

Overall, 44.5% of respondents rated their spring turkey hunting experience as "very high" or "fairly high," while 25.7% rated their hunt as "fairly low" or "very low". The most important factors that influenced respondents' perceptions of a quality hunt were "killing a turkey (tom, jake or bearded hen)" and "weather". The least important factor was "seeing turkeys/calling birds in/hearing gobbling".

Most respondents (44.3%) feel that turkey numbers in the zones they hunted in the spring decreased relative to the year before. More than five times as many hunters would like to see the number of permits available for the zone(s) they hunted stay the same as opposed to increased.

Respondents were asked to rate their overall satisfaction with spring turkey hunting in Wisconsin on a scale of 1 to 10, with 10 being the best and 1 being the worst; statewide, they ranked their overall satisfaction level at 7.1.

Results of the 2011 Fall Turkey Hunter Questionnaire

A sample of fall turkey hunter names and addresses was drawn from the current fall turkey hunter permit file. A survey was mailed to approximately 6,000 fall turkey hunters after the completion of the fall turkey season. The questionnaire was mailed in proportion to the number of permits distributed in each zone. All questionnaires asked each hunter specific questions about their fall turkey hunting experience. A second mailing was made to 3,000 of the non-respondents. Data from all returned questionnaires were entered into the DNR's server and summarized using the Statistical Analysis System (SAS).

A total of 2,887 hunter surveys were returned. After duplicates were removed, the resulting response rate was 47.2%.

Approximately 42% of respondents have fewer than 5 years of fall turkey hunting experience, 31% have between 6 and 10 years of experience, 15% have between 11 and 15 years of hunting experience, and only 12% have 16 or more years of experience. These results are very similar to previous years. It would appear that many hunters are still just discovering fall turkey hunting; Wisconsin has had a fall turkey season for 20+ years.

The fall turkey season was extended in 2011. Since 2007, the season has opened on the second Saturday in September and gone through the 3rd Thursday in November. The 2011 season was extended in Turkey Management Zones (TMZ) 1-5 with the fall hunt reopening on 28 November and going through the 31st of December. This was done to give hunters more opportunity to hunt fall turkeys. This added 34 days to the end of the season in 2011. Most hunters (72%) were aware of the extension and “liked” it or “liked it a lot” (78%). Despite the longer season, the percent of hunters participating (69.3%) changed little from last year (70.8%). Hunters spent more time in the field in 2011, averaging 6.6 days of hunting, vs. 6.3 days in 2010. Hunting pressure was high on the weekends, with 49.5% of days in the field being a Saturday or Sunday.

Fall hunter success, based on turkey harvest registration data, was 9.9%. This is uncorrected for non-hunters and is probably a low estimate. Statewide, 20.7% of the respondents from the questionnaire harvested a turkey this fall. Of those reporting, 17.3% with one tag harvested one turkey; 32.9% with two tags harvested one turkey, 16.8% harvested two turkeys; for hunters with more than two tags 15.6% harvested one turkey, 22.2% harvested two turkeys, 13.3% harvested 3 turkeys, 8.9% harvested four turkeys, and 6.7% harvested five or more. This success rate is biased high because hunters who were successful may have been more likely to return the survey than hunters who were unsuccessful.

Active hunters were asked if they hit any turkeys they were unable to retrieve. 3.5% were unable to find their bird; 57 hunters reported hitting one turkey, and 5 hunters reported hitting 2 turkeys.

Hunters were asked what weapon they used most, and what weapon they used to harvest their turkey; 68.6% of respondents who hunted said that they used a gun to hunt fall turkeys, while 89.3% said that they used a gun to harvest a fall turkey.

The most commonly used method to hunt fall turkeys was ambushing from concealment (34.4%). Incidental to bow deer hunting was the next most common method (23.9%). Shoot from the roost was the least utilized hunting method (0.6%).

Eighty-three percent of respondents hunted on private land, while 15.6% hunted on public land. Of those who hunted on private land, 38.0% own the land. The mean number of turkeys seen by hunters while afield hunting was 27.1, a decrease from 30.1 in 2010.

The percentage of survey respondents who reported the presence of other hunters interfering with their fall turkey hunting was 9.2%. Respondents reported archery deer hunters as the most common cause of interference. The second most common sources of interference were hunters hunting small game.

Despite concerns that hunters in the “new” larger zones would interfere with each other, 11.1% responded to “other hunters kept me from hunting where I wanted to” with “definitely yes” or “somewhat.” Similarly, 7.3% of respondents answered “there was too much competition from other

hunters where I hunted” with “definitely yes” or “somewhat.” Only 7.1% of the respondents indicated that other hunters interfered with their chance to bag a bird.

The number of hunters who rated their hunting experience as "Fairly High" or "Very High" was 35.5%. This was greater than the hunters who rated their hunt as "Fairly Low" or "Very Low" (25.0%). Hunters were asked to rate several factors that influenced their perception of a “quality” fall turkey hunt. The most important factor leading to a “quality” turkey hunt was “seeing turkeys”. The next most important factor was “an opportunity to harvest a turkey”. The least important factor was “weather” and “not seeing other hunters”.

Sixty-four respondents reported knowing of 1 or more turkeys that were tagged but not registered. Forty-seven respondents reported knowing of 1 or more turkeys that were neither tagged nor registered.

For the 2011 season, the hunting of fall turkey with the aid of dogs was allowed in all counties. Only 2.3% of hunters hunted fall turkey with the aid of dogs.

Most hunters (70.9%) would like to see the number of permits available in the zone they hunted remain unchanged, while 23.1% would like to see the number of permits increased. Only 6.0% would like to see permit number decrease. Most hunters (81.8%) felt the number of turkeys in the zone they hunted decreased or stayed the same from the year before.

Respondents were asked to rate their overall satisfaction with the Wisconsin Wild Turkey Program. Over 74.9% responded as “very satisfied” or “somewhat satisfied” and 16.5% responded as “satisfied.” Only 8.7% responded as “somewhat dissatisfied” or “very dissatisfied”.

Wild Turkey License & Stamp Sales, 1999-2011

Year	Resident fall licenses sold	Non-resident fall licenses sold	Resident spring licenses sold	Non-resident spring licenses sold	Wild Turkey Stamps sold
1999	14,194	118	47,692	1,888	56,296
2000	15,998	249	53,472	2,328	63,194
2001	16,305	266	58,166	2,915	68,872
2002	16,558	265	65,303	3,240	75,745
2003	19,546	334	67,155	3,057	79,133
2004	24,306	328	82,817	3,395	95,965
2005	23,492	320	84,004	3,641	97,124
2006	26,353	475	98,239	4,056	109,969
2007	27,799	513	102,874	4,405	115,473
2008	26,273	538	100,540	4,211	112,925
2009	23,278	497	108,171	4,626	119,987
2010	20,496	480	101,869	4,752	113,300
2011	18,140	375	97,519	4,600	108,324

Preliminary Results of the 2012 10-week Brood Survey

Mild winter conditions and an early spring green-up meant game bird survival and physical condition should have been good going into the breeding season. Brood rearing conditions in Wisconsin in 2012 were above average for temperature with much of the state seeing temperatures 2-4 degrees above average for the months of June-August. Precipitation was generally average to below for the northern half of the state. Much of the southern half was below to much below average with some areas in the south receiving little to no rain for extended periods of the brooding rearing season. One large rainfall event in the far northwestern part of northern Wisconsin could have had effected brood survival during the summer.

DNR field personnel were asked to report the number and size of game bird broods observed from 10 June through 18 August during their normal working hours. At the end of the survey period, brood reports were then summarized and compiled by the wildlife surveys program. Reports from field staff fell 27% in 2012 from the previous year and are well below historic averages.

Turkeys showed a 104% increase in the number of broods seen per observer hour and an increase in the size of the broods seen compared to 2011. All 5 DNR regions showed an increase in the observation rate in 2012 from 2011 levels, northern (151%), northeast (77%), south central (136%), southeast (176%), and the west central regions (26%). The statewide observation rate was 34% above the long-term mean and the 3rd highest since 1987. The average size of a brood seen in 2012 was 4.9 young per brood, up from the 4.5 young per brood seen in 2011.

Revision of the Wisconsin Wild Turkey Management Plan

Following the successful reintroduction of wild turkeys to Wisconsin in the 1970s, turkeys have expanded their range so that they now occupy all counties in the state, and spring and fall turkey hunting have become very popular outdoor activities. The current Wisconsin Wild Turkey Management Plan, written in 1996, needs to be revised to include treatment of contemporary issues related to turkey management in the state. A critical part of the revision process includes soliciting, gathering, and analyzing input from the public regarding challenges and opportunities in turkey management and hunting in Wisconsin. During late April and early May of 2012, eleven public input sessions were held around the state, during which attendees were presented with background information and asked to complete a survey that addressed important issues related to the future direction of turkey management. The survey was also available online through the end of May. A total of 2,124 surveys were completed (2,047 submitted online; 77 from in-person sessions). Information gleaned from this survey will help all of the partners involved in managing our state's turkey flock in developing a plan that protects the turkey resource, but also optimizes recreational opportunities for outdoor enthusiasts. A draft of the revised plan will be developed by the winter of 2012-13, with the final plan being submitted for approval by summer 2013.