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BLACK BEAR

**By
Colin P. Carpenter**

Season Results and Highlights

West Virginia hunters harvested 2,692 black bears during the combined 2013 archery and firearms seasons (Tables 1, 2 and 3). This is the fourth time the kill has topped 2,000 in the past 5 years. The harvest of 2013 was 2% lower than the 2012 record harvest of 2,735 bears and is the second highest harvest on record (Figure 1).

The 2013 Mast Survey and Hunting Outlook documented the lowest statewide oak mast index since the Survey's inception. However, an abundant beech and hickory crop statewide allowed the index for all hard mast to fall just 16% below the 42-year average. In addition, oak mast was reported in localized areas at higher elevations of the eastern mountain counties. Decreased oak mast conditions statewide concentrated bears around available food sources and led to an increased archery harvest. The decrease in oak mast availability also pushed some bears to the den early, and led to a decreased bear harvest during the traditional December season. Additional bear hunting seasons in September and October with or without hounds and concurrent bear and deer hunting seasons in 29 counties bolstered a bear harvest that would have declined substantially due to the decreased mast conditions statewide.

Hunters took 853 (523M: 330F) bears during the 2013 archery season (Tables 1 and 2). Biologists predicted that the archery harvest would increase in 2013 due to the overall decline in oak mast production compared to 2012. The top five counties were Wyoming (80), Fayette (61), Raleigh (58), Logan (52) and Randolph (52).

Firearms hunters harvested 1,839 (1,118M: 721F) bears during the 2013 combined gun seasons (Table 4). This is a 9% decrease over the 2,012 bruins killed in 2012 (Table 4). Hunters took 684 bears in September and October, 362 during the concurrent buck/bear season and 793 during the traditional December season (Table 1). Top five counties were Randolph (245), Pendleton (202), Greenbrier (151), Webster (134) and Pocahontas (131).

Non-hunting Mortalities

Generally, non-hunting mortalities increase in years of below-average mast production. However, that was not the case in 2013. One-hundred seventy-five bears were killed on highways, died as a result of illegal or marauder activities, or succumbed from other non-hunting causes (electrocution, accidental poisoning, etc.) (Tables 4 and 5). This is down 4% from the 183 non-hunting mortalities recorded in 2012 (Table 4). There were 65 deaths from vehicles in 2013 compared to 72 in 2012. The number of illegal deaths was down from 5 to 4 from 2012 to 2013, respectively. Miscellaneous deaths increased from 2 in 2012 to 12 in 2013. Bears killed for nuisance or damage activity (marauders), decreased from 104 in 2012 to 94 in 2013. The combined seasonal and non-seasonal deaths (2,867) is the second largest recorded in West Virginia (Table 4).

Damage Payments and Nuisance Complaints

All hunters who pursue bears are required to buy bear damage stamps (Class DS). Funds derived from stamp sales are deposited in a special bear damage account to reimburse property owners for real and personal property damage caused by bears.

The number of bear damage claims was down 2% from 210 in 2012 to 206 in 2013 (Table 6). Total payments of \$249,753 were 9% lower than the \$274,329 paid out in 2012. Claims were reported in 32 counties in 2012 and 37 counties in 2013. There were 60 claims for bees (compared to 65 in 2012) totaling \$32,759, 22 for livestock at \$5,836 (22 in 2012), 69 for corn at \$178,934 (64 in 2011), and 55 (59 in 2011) miscellaneous claims at \$32,224.

Greenbrier County had the greatest dollar amount in compensations at \$46,475 followed by Hardy (\$40,965), Preston (\$39,988), Monroe (\$26,745), and Tucker (\$17,672). Greenbrier County had the highest number of claims (33) followed by Hardy (15), Pendleton (14), Preston (12) and Hampshire and Monroe (11).

West Virginia Division of Natural Resources (DNR) employees received 1,287 nuisance bear calls in 2013 compared to 811 in 2012. The 5 counties with the most complaints were Raleigh (158), Greenbrier (145), Nicholas (109), Fayette (84) and Wyoming (63).

Tooth Collections

Age data from the 2012 tooth samples have been received and hunters have been notified of their bear's age. Hunters submitted 753 useable teeth (correct tooth, identification matched check tags, etc.) for age consideration. Seven (<1%) were cubs, 40% (303) were yearlings, 20% (148) were 2-year olds, 12% (93) were 3-year olds, and the remaining 27% (202) were 4-years old or older. Biologists use age data from hunter-harvested bear teeth to calculate population estimates and mortality rates for black bears in West Virginia. The 753 useable teeth submitted in 2012 represent only 28% of the total black bear harvest. Low numbers of bear teeth submitted by hunters for age analysis lead to reduced precision in estimation of vital rates that are critical for managing and monitoring West Virginia's black bear population. The West Virginia Bearhunters Association has pledged their support of mandatory tooth submission for all harvested bears in West Virginia. The West Virginia Division of Natural Resources will work with the West Virginia Bearhunters Association to design an efficient means of collecting teeth from hunter-harvested bears.

Reproductive Tract Collections

Black bears have one of the lowest reproductive rates of any land mammal in North America. The fact that black bears usually only reproduce every 2 years, have relatively small litters and take several years to reach sexual maturity can lead to slow population growth. Litter size, adult female survival, and inter-birth interval are the three factors that influence black bear populations. However, adult female survival is the only factor that managers have control over. Hunting season timing and length are adjusted to manipulate adult female survival. Wildlife managers and biologists have been collecting female reproductive tracts to estimate litter size around the state. The data gathered from reproductive tracts (cubs/female) mirrors data collected from visiting the dens of radio-tagged females.

Managers collected 11 reproductive tracts that supplied useful information in 2012. Reproductive tract data lags one year behind because researchers are waiting on age data. Information from reproductive tracts obtained in 2012 cannot be fully analyzed until ages are

determined. One yearling tract was examined and it was not bred in 2012. Six sows over the age of 3 showed evidence of breeding and averaged 2.33 corpora lutea per female. Four females showed evidence of giving birth in 2012 and averaged 2.5 placental scars.

Black Bear Research

Reproductive tracts and tooth collections from harvested bears provide the most cost-effective way to monitor the black bear population and are being used to help make decisions about changes in hunting regulations. Therefore, radio collars have only been left on a small number of females in the northern part of the state (7 in 2013). In 2013, managers handled 2 sows with yearlings and tagged all 3 yearlings in each litter. Managers visited 5 sows with neonate cubs ($\bar{C} = 2.80$). One sow had a 5-cub litter.

A new black bear research project was initiated in 2011. West Virginia participated in a study with Pennsylvania and New Jersey to examine movements, home range, survival and harvest vulnerability of bears that live in and around urban areas. Satellite collars were deployed on black bears around the cities of Charleston, Beckley, and Morgantown. These collars transmitted the daily locations of the bears by text message. The West Virginia Division of Natural Resources provided the funding necessary to hire a student to analyze the data collected in all 3 states. The data collection phase of the Urban Black Bear Project ended in December 2012. Andrew Tri (the student who compiled and analyzed the data for the project) has completed all the requirements necessary to obtain his Doctor of Philosophy (PhD) degree from West Virginia University. Dr. Tri is currently finishing the final report of the project to present to the 3 cooperating states.

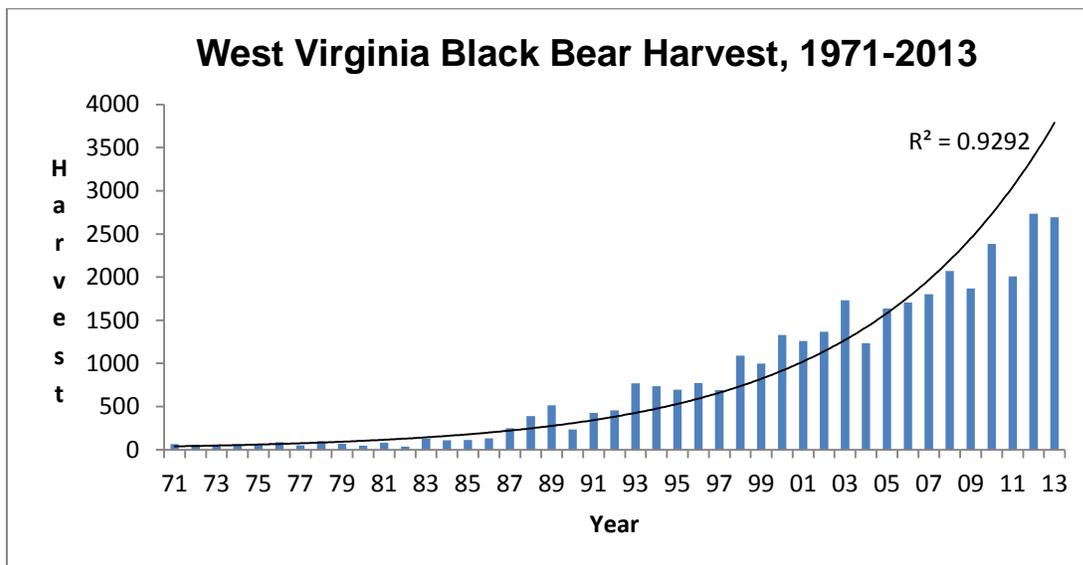


Figure 1. West Virginia black bear harvest, 1971-2013.

Table 1. West Virginia 2013 black bear harvest by season and county.

County	Bow Total	Sept/Oct Total	Buck Gun Total	December Total	TOTAL
Barbour	22	10	9	5	46
Brooke	0	0	0	0	0
Hancock	0	0	0	0	0
Harrison	4	0	0	0	4
Marion	2	0	0	0	2
Marshall	0	0	0	0	0
Monongalia	7	0	3	1	11
Ohio	0	0	0	0	0
Preston	46	35	26	24	131
Taylor	4	0	0	0	4
Tucker	11	43	10	44	108
Wetzel	1	0	0	0	1
District I Subtotal	97	88	48	74	307
Berkeley	2	0	0	0	2
Grant	7	32	11	45	95
Hampshire	20	0	12	3	35
Hardy	17	51	26	29	123
Jefferson	3	0	0	0	3
Mineral	7	8	2	5	22
Morgan	7	0	4	0	11
Pendleton	19	65	29	108	221
Dist. II Subtotal	82	156	84	190	512
Braxton	14	8	9	17	48
Clay	13	14	2	8	37
Lewis	3	0	4	0	7
Nicholas	35	39	27	45	146
Pocahontas	9	52	5	74	140
Randolph	52	87	17	141	297
Upshur	2	6	5	5	18
Webster	44	44	24	66	178
Dist. III Subtotal	172	250	93	356	871
Fayette	61	23	29	25	138
Greenbrier	29	43	17	91	180
McDowell	46	13	0	10	69
Mercer	27	0	2	3	32
Monroe	29	14	12	8	63
Raleigh	58	19	21	5	103
Summers	10	0	6	2	18
Wyoming	80	16	0	3	99
Dist. IV Subtotal	340	128	87	147	702
Boone	45	28	30	13	116
Cabell	0	0	0	0	0
Kanawha	30	19	20	10	79
Lincoln	3	0	0	0	3
Logan	52	10	0	1	63
Mason	0	0	0	0	0
Mingo	26	5	0	1	32
Putnam	0	0	0	0	0
Wayne	1	0	0	0	1
Dist. V Subtotal	157	62	50	25	294
Calhoun	2	0	0	0	2
Doddridge	0	0	0	0	0
Gilmer	0	0	0	0	0
Jackson	0	0	0	0	0
Pleasants	0	0	0	0	0
Ritchie	2	0	0	1	3
Roane	1	0	0	0	1
Tyler	0	0	0	0	0
Wirt	0	0	0	0	0
Wood	0	0	0	0	0
Dist. VI Subtotal	5	0	0	1	6
STATE TOTAL	853	684	362	793	2,692

Table 2. Sex ratios of West Virginia black bears for September or November gun season, bow season, and December gun season, 1964-2013.

Year	Bow or gun season Late September		Bow season and/or Early Nov. gun season		Late Nov. or December gun season		Annual Kill		Total*
	Male	Female	Male	Female	Male	Female	Male	Female	
1964-1978	0	0							
15-Yr Total	0	0	318	345	178	71	496	416	912
Sex Ratios	0	0	48%	52%	71%	29%	54%	46%	
1979	0	0	0	0	50	18	50	18	68
1980	0	0	2	2	34	9	36	11	47
1981	0	0	3	2	59	16	62	18	80
1982	0	0	11	5	16	4	27	9	36
1983	0	0	11	6	78	34	89	40	129
1984	0	0	8	8	51	43	59	51	110
1985	0	0	14	7	68	24	82	31	113
1986	0	0	31	14	61	26	92	40	132
1987	0	0	40	14	146	51	186	65	251
1988	0	0	21	16	198	165	219	181	400
1989	0	0	81	96	198	135	279	231	510
1990	0	0	41	20	114	60	155	80	235
1991	0	0	72	57	186	111	258	168	426
1992	0	0	112	89	169	85	281	174	455
1993	0	0	141	96	340	190	481	286	767
1994	0	0	111	73	290	258	401	331	732
1995	0	0	152	75	310	153	462	228	690
1996	0	0	114	101	355	198	469	299	768
1997	0	0	225	198	178	85	403	283	686
1998	0	0	167	97	481	337	648	434	1,082
1999	0	0	256	168	369	201	625	369	994
2000	0	0	196	102	655	364	851	466	1,317
2001	0	0	302	165	482	301	784	466	1,250
2002	0	0	540	321	327	169	867	490	1,357
2003	0	0	605	422	450	222	1,055	644	1,699
2004	0	0	319	219	479	218	798	437	1,235
2005	0	0	432	285	616	301	1,048	586	1,634
2006	0	0	399	266	727	312	1,126	578	1,704
2007	0	0	521	328	637	318	1,158	646	1,804
2008	348	322	283	177	597	343	1,228	842	2,070
2009	118	79	575	417	464	215	1,157	711	1,868
2010	215	248	314	146	932	530	1,461	924	2,385
2011	332	306	356	254	483	276	1,171	836	2,007
2012	380	310	462	261	844	478	1,686	1,049	2,735
2013	375	309	523	330	743	412	1,641	1,051	2,692
35-Year Total	1,768	1,574	7,440	4,837	12,187	6,662	21,395	13,073	34,468
Average Sex Ratios	53%	47%	61%	39%	65%	35%	62%	38%	
2013 Sex Ratios	55%	45%	61%	39%	64%	36%	62%	38%	

*Represents bears of known sex and not the total harvest in each year.

Table 3. West Virginia total black bear harvest by county, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	25	31	31	43	46
Brooke	0	0	0	0	0
Hancock	0	0	0	0	0
Harrison	1	1	0	3	4
Marion	0	0	4	1	2
Marshall	0	0	1	0	0
Monongalia	7	11	4	8	11
Ohio	0	0	0	0	0
Preston	102	91	129	132	131
Taylor	2	3	4	7	4
Tucker	89	101	90	94	108
Wetzel	1	0	3	1	1
District I Subtotal	227	238	266	289	307
Berkeley	6	2	2	3	2
Grant	60	101	89	116	95
Hampshire	22	61	19	72	35
Hardy	85	126	123	146	123
Jefferson	3	2	1	12	3
Mineral	13	26	18	14	22
Morgan	6	12	7	18	11
Pendleton	101	207	146	197	221
Dist. II Subtotal	296	537	405	578	512
Braxton	27	51	26	42	48
Clay	28	35	28	47	37
Lewis	3	5	5	13	7
Nicholas	114	152	120	149	146
Pocahontas	97	185	127	187	140
Randolph	241	234	218	240	297
Upshur	11	22	8	22	18
Webster	146	174	151	223	178
Dist. III Subtotal	667	858	683	923	871
Fayette	144	120	98	192	138
Greenbrier	126	237	172	183	180
McDowell	23	29	46	67	69
Mercer	31	10	17	15	32
Monroe	38	32	21	34	63
Raleigh	88	69	71	71	103
Summers	11	6	13	13	18
Wyoming	42	25	49	52	99
Dist. IV Subtotal	503	528	487	627	702
Boone	63	97	55	117	116
Cabell	0	0	1	0	0
Kanawha	71	78	73	122	79
Lincoln	0	1	0	2	3
Logan	21	33	23	51	63
Mason	0	0	0	0	0
Mingo	6	6	2	11	32
Putnam	0	0	0	0	0
Wayne	1	1	0	2	1
Dist. V Subtotal	162	216	154	305	294
Calhoun	0	3	4	2	2
Doddridge	0	0	1	0	0
Gilmer	3	3	3	3	0
Jackson	1	0	0	0	0
Pleasants	1	0	0	0	0
Ritchie	2	1	2	4	3
Roane	2	1	2	4	1
Tyler	0	0	0	0	0
Wirt	3	0	0	0	0
Wood	1	0	0	0	0
Dist. VI Subtotal	13	8	12	13	6
STATE TOTAL*	1,868	2,385	2,007	2,735	2,692

*Totals change as late tags are added to the database.

Table 4. Number of black bears killed each year in West Virginia and cause of death.

Year	Hunting Season		Illegal Kill	Road Kill	Marauders	Others	Total
	Bow	Gun					
70's Subtotal	14	523	70's Average Annual Bag: Bow 2; Gun 65				
80's Subtotal	261	1,542	80's Average Annual Bag: Bow 26; Gun 154				
1990	61	174	14	23	13	10	295
1991	131	297	18	21	13	2	482
1992	201	254	17	48	18	8	546
1993	239	529	24	40	4	6	842
1994	185	550	10	31	5	5	786
1995	227	470	14	37	6	8	762
1996	214	558	6	23	15	7	823
1997	420	272	13	58	30	10	803
1998	265	825	12	30	8	6	1,146
1999	420	577	9	24	8	15	1,053
90's Subtotal	2,363	4,506	90's Average Annual Bag: Bow 236; Gun 450				
2000	305	1,023	6	16	8	4	1,362
2001	475	785	18	43	22	1	1,344
2002	726	670	14	82	28	10	1,530
2003	774	958	17	87	61	7	1,904
2004	374	861	7	55	22	11	1,330
2005	585	1,076	15	62	18	10	1,766
2006	516	1,188	8	61	36	10	1,819
2007	728	1,076	4	62	155	7	2,032
2008	460	1,610	3	38	34	6	2,151
2009	992	876	11	70	184	9	2,142
00's Subtotal	5,935	10,123	00's Average Annual Bag: Bow 600; Gun 1,002.				
2010	460	1,925	6	66	35	5	2,497
2011	610	1,397	8	107	85	6	2,213
2012	723	2,012	5	72	104	2	2,918
2013	853	1,839	4	65	94	12	2,867
10's Subtotal	2,646	7,173	10's Average Annual Bag: Bow 662; Gun 1,793				

*November Gun Seasons held in 1989, and 2002 - 2013 in certain counties.

**September Season held in 2008-2013 in certain counties.

***Check tags without season (<0.05%) marked were assumed gun kills for this table.

Table 5. West Virginia 2013 nonseasonal black bear mortalities by county and type.

County	Roadkills	Illegal	Marauders	Misc.	Total
Barbour	0	0	0	4	4
Brooke	0	0	0	0	0
Hancock	0	0	0	0	0
Harrison	0	0	0	0	0
Marion	0	0	0	0	0
Marshall	0	0	0	0	0
Monongalia	2	0	0	0	2
Ohio	0	0	0	0	0
Preston	0	0	0	0	0
Taylor	0	0	0	0	0
Tucker	0	0	3	0	3
Wetzel	0	0	0	0	0
Dist. I Subtotal	2	0	3	4	9
Berkeley	0	0	1	0	1
Grant	0	0	0	1	1
Hampshire	1	0	3	1	5
Hardy	0	0	0	0	0
Jefferson	0	0	0	0	0
Mineral	0	0	0	0	0
Morgan	1	0	0	0	1
Pendleton	0	0	3	1	4
Dist. II Subtotal	2	0	7	3	12
Braxton	7	0	4	0	11
Clay	1	0	2	0	3
Lewis	2	0	0	0	2
Nicholas	21	0	13	0	34
Pocahontas	0	0	14	1	15
Randolph	2	0	3	0	5
Upshur	1	0	1	0	2
Webster	1	0	3	0	4
Dist. III Subtotal	35	0	40	1	76
Fayette	5	0	9	0	14
Greenbrier	6	0	16	0	22
McDowell	3	0	0	0	3
Mercer	1	1	0	0	2
Monroe	0	0	3	1	4
Raleigh	2	3	7	1	13
Summers	0	0	0	0	0
Wyoming	0	0	1	0	1
Dist. IV Subtotal	17	4	36	2	59
Boone	3	0	2	1	6
Cabell	0	0	0	0	0
Kanawha	5	0	3	1	9
Lincoln	0	0	0	0	0
Logan	0	0	1	0	1
Mason	0	0	0	0	0
Mingo	0	0	2	0	2
Putnam	0	0	0	0	0
Wayne	0	0	0	0	0
Dist. V Subtotal	8	0	8	2	18
Calhoun	0	0	0	0	0
Doddridge	0	0	0	0	0
Gilmer	0	0	0	0	0
Jackson	0	0	0	0	0
Pleasants	0	0	0	0	0
Ritchie	0	0	0	0	0
Roane	1	0	0	0	1
Tyler	0	0	0	0	0
Wirt	0	0	0	0	0
Wood	0	0	0	0	0
Dist. VI Subtotal	1	0	0	0	1
Unknown	0	0	0	0	0
State Total	65	4	94	12	175

Table 6. Black bear damage claims paid and payments by county 2009-2013.

County	2009		2010		2011		2012		2013	
	Claims	Payments								
Barbour	3	\$832	1	\$88	1	\$609	0	\$0	1	\$208
Berkeley	1	\$274	0	\$0	0	\$0	0	\$0	3	\$899
Boone	2	\$764	3	\$4,968	3	\$2,835	2	\$587	0	\$0
Braxton	3	\$5,775	7	\$3,205	4	\$4,664	1	\$383	9	\$3,332
Brooke	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Cabell	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Calhoun	0	\$0	0	\$0	1	\$55	0	\$0	0	\$0
Clay	3	\$977	7	\$6,900	1	\$43	1	\$225	1	\$149
Doddridge	1	\$150	0	\$0	1	\$350	0	\$0	0	\$0
Fayette	5	\$6,202	0	\$0	1	\$3,600	4	\$1,672	8	\$5,352
Gilmer	0	\$0	0	\$0	0	\$0	1	\$1,040	2	\$185
Grant	5	\$3,066	11	\$9,811	6	\$14,983	5	\$9,064	5	\$7,425
Greenbrier	35	\$82,867	12	\$16,031	19	\$51,660	24	\$63,572	33	\$46,475
Hampshire	10	\$7,421	4	\$2,089	13	\$11,619	15	\$8,993	11	\$5,791
Hancock	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Hardy	9	\$12,317	11	\$4,055	13	\$50,839	13	\$28,052	15	\$40,965
Harrison	0	\$0	2	\$804	1	\$228	0	\$0	0	\$0
Jackson	1	\$274	0	\$0	0	\$0	0	\$0	1	\$1,817
Jefferson	1	\$833	0	\$0	0	\$0	0	\$0	0	\$0
Kanawha	2	\$114	5	\$681	0	\$0	2	\$199	2	\$820
Lewis	2	\$1,163	0	\$0	0	\$0	3	\$888	1	\$669
Lincoln	0	\$0	0	\$0	0	\$0	1	\$328	0	\$0
Logan	7	\$5,004	2	\$809	3	\$2,167	8	\$3,256	6	\$1,868
Marion	1	\$126	0	\$0	0	\$0	1	\$834	2	\$952
Marshall	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Mason	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
McDowell	0	\$0	0	\$0	3	\$1,031	1	\$2	0	\$0
Mercer	2	\$1,438	1	\$390	2	\$530	2	\$580	6	\$5,679
Mineral	7	\$1,793	10	\$5,320	11	\$12,341	8	\$4,107	1	\$863
Mingo	0	\$0	2	\$666	0	\$0	1	\$313	3	\$824
Monongalia	2	\$150	3	\$785	0	\$0	0	\$0	1	\$54
Monroe	1	\$29	4	\$8,062	1	\$232	3	\$10,753	11	\$26,745
Morgan	4	\$2,789	1	\$129	3	\$1,088	1	\$1,150	2	\$610
Nicholas	36	\$23,123	11	\$4,269	12	\$7,080	15	\$5,039	9	\$7,206
Ohio	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Pendleton	17	\$18,895	7	\$5,133	25	\$29,434	17	\$32,054	14	\$9,910
Pleasants	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Pocahontas	23	\$41,204	19	\$18,420	18	\$29,782	22	\$22,211	8	\$9,190
Preston	15	\$27,690	9	\$6,080	26	\$74,074	11	\$33,158	12	\$39,988
Putnam	1	\$268	0	\$0	1	\$1,193	1	\$1,000	0	\$0
Raleigh	8	\$3,932	4	\$1,344	5	\$1,558	6	\$1,447	4	\$1,093
Randolph	23	\$10,263	24	\$6,499	19	\$7,773	9	\$1,651	8	\$2,581
Ritchie	0	\$0	0	\$0	0	\$0	0	\$0	1	\$350
Roane	0	\$0	0	\$0	0	\$0	0	\$0	1	\$2,403
Summers	4	\$1,094	0	\$0	2	\$1,396	2	\$742	2	\$813
Taylor	0	\$0	0	\$0	1	\$70	0	\$0	0	\$0
Tucker	12	\$24,477	4	\$2,966	8	\$25,319	12	\$28,290	9	\$17,672
Tyler	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Upshur	2	\$738	0	\$0	6	\$1,299	0	\$0	1	\$75
Wayne	0	\$0	0	\$0	1	\$484	1	\$299	1	\$451
Webster	21	\$8,725	7	\$1,159	8	\$2,096	9	\$7,471	4	\$1,659
Wetzel	0	\$0	1	\$410	7	\$3,100	5	\$4,154	3	\$2,244
Wirt	0	\$0	0	\$0	1	\$1,041	0	\$0	1	\$919
Wood	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Wyoming	1	\$683	4	\$3,127	2	\$434	3	\$815	4	\$1,517
Total	270	\$295,450	176	\$114,201	229	\$345,007	210	\$274,329	206	\$249,753

WILD TURKEY

**By
Keith D. Krantz**

Spring Harvest

The 2013 spring gobbler harvest was 11,162 birds (Table 1), which was 34% greater than the 2012 harvest and 14.7% more than the 5-year average. Spring gobbler season began in 1966 on our wildlife management areas (WMA) and went statewide in 1968. In those 48 seasons, the 2013 harvest ranks 14th overall and by far the highest in the past 7 years. All of our district harvest totals exceeded the 2012 season and except for District II whose spring harvest mirrored the 5-year average, all of the other districts exceeded their 5-year averages by percentages ranging from 5.6% (District V) to 20.8% (District III).

The top county harvests were Preston (403), Mason (370), Harrison (355) and Kanawha (332) with Ritchie and Jackson tied for fifth with a harvest of 326 birds. Rounding out the top 10 counties were McDowell (308), Marshall (300), Greenbrier (299) and Wood (294).

Table 2 depicts harvest by WMA. Ranking these areas by harvest revealed that 4 of the top 10 were on state owned wildlife management areas. Leading the state areas was Bluestone WMA with a harvest of 38 gobblers, almost twice that of 2012. Burnsville (30), Cornstalk (28) and Stonewall Jackson (24) rounded out the top state owned WMAs. The best federally owned management area was the Potomac Unit with a harvest of 39 long beards. This area was followed by Little River (35), Cranberry (28), Wardensville (25), Otter Creek (23) and the Neola (22) units of the National Forest.

Higher total harvests are expected on National Forest Units because these areas are orders of magnitude larger than our state owned or operated WMAs. Comparing the harvests on these areas on an acreage basis reveals that the Potomac WMA had a harvest of one gobbler per 1,047 acres. The state owned or operated property with the highest total harvest was Bluestone WMA with a gobbler of one per 500 acres. While the National Forest offers large tracts of huntable acreage, our state owned properties are comprised of better turkey habitat.

The one-day spring gobbler youth hunt, which occurred the Saturday preceding the regular Monday opening, yielded a harvest of 563, up 30.3 percent from the 432 killed in 2012 (Table 3). The first week of the spring season accounted for 59 percent of the harvest while 18 percent of the toms were harvested the second week, 9 percent the third week and 8 percent the fourth week, less than 1 percent of the hunters recorded an unknown or unrecognizable harvest date (Table 3).

Fall Harvest

A total of 42 counties were open during the fall 2013 season. Counties open to fall turkey hunting include the following:

- Fourteen (14) traditional fall hunting counties were open to a four-week split season (October 12 – October 19 and October 28 – November 16, 2013).
- Thirteen (13) counties were open to a two-week split season (October 12 – October 19 and October 28 – November 2, 2013).
- Fifteen (15) counties had a one-week season (October 12 – October 19, 2013).

The 2013 fall harvest (999) was 22.8 percent lower than the 1,294 birds checked in during the 2012 fall season and 16.4 percent lower than the five-year average (Table 4). Only District II exceeded their 5-year average, but District IV missed it by only 1.2 percent. The greatest departure from their 5-year averages was in District V where harvest was off 56.7 percent, District III and VI declined by 39 and 37 percent respectively, and District 1 declined by 9 percent. Fall wild turkey harvests are highly influenced by hunter participation and effort, annual recruitment of young turkeys (they are more susceptible to harvest than adults in the fall) and hard mast conditions. Any one of these or a combination of them likely resulted in the observed decline.

Top counties for 2013 were Preston (77), Monroe (71), Randolph (59), Greenbrier (58) and Pocahontas (57) (Table 4). The traditional fall hunting counties, including Preston County, the Eastern Panhandle and the mountain regions of the state, accounted for 63 percent of the total fall kill, which was a 12.5 percent increase over last year. Of interest was the change in harvest by county with Greenbrier's harvest decreasing 58 percent from 2012. It remained as the only county in the top 5 for both 2012 and 2013. Similar to the spring gobbler kill, Bluestone WMA led the state owned properties (Table 5) and the Little River WMA unit of the Monongahela National Forest led all other units with a harvest of 13.

Similar in percentage but not magnitude, opening day generated a kill of 168 birds or 17 percent of the total harvest (Table 6). The first week of the fall season contributed 40 percent of the total kill which was down from the 49 percent in 2012 and 45 percent in 2011. Similar to last year, but different than years prior to that, an early October antlerless deer season was implemented in what was normally the second week of the fall season. Because fall hunting mortality can be additive to total mortality and negatively impact the number of females available for breeding in the spring, we closed turkey hunting that week giving us a split fall season. After the October antlerless deer season closed, the fall turkey season reopened in select counties and ran continuously through the second full week of November.

The combined spring and fall harvests in 2013 was 12,161 (Table 7) which ranks 16th since 1966 (the year spring gobbler season began) and was 27 percent greater than last year.

Surveys

Spring Gobbler Survey

The Wildlife Resources Section and the West Virginia Chapter of the National Wild Turkey Federation conduct an annual survey of spring gobbler hunters. The survey is done entirely by volunteer sportsmen that donate their time and effort to gather information to help the DNR manage wild turkeys. Typically, the West Virginia Chapter sends survey forms to its members and the Wildlife Resources Section compiles the data from these and other participants. A survey report is written and provided free to cooperators. Due to waning hunter participation and a lack of observers in certain counties, surveys were sent to an additional selection of successful spring gobbler hunters from the year before.

During 2013, results were compiled from 311 hunters, representing a 31 percent increase in hunter participation from last year which had an increase in participation of 42 percent from 2011 because we actively solicited help. Cooperators took 2,415 hunting trips and heard 4,613 gobblers, which was almost twice as many birds as heard in 2012. The addition of 73 cooperators added 593 trips to the total this year which added an almost equal proportion of birds heard i.e., 25 percent. The gobbling rate (50.2 gobblers heard/100 hours) was 44 percent higher (Figure 1) than 2012 (35/100 hours) and down slightly from the 30-year average (51.8 gobblers heard/100 hours).

Similar to last year the most gobblers heard was in the Southwestern (68.4 gobblers per 100 hours) and Western (55.8 per 100 hours) regions of the State. On average, hunters heard 1.91 gobblers per trip in these regions, down slightly from last year. The survey also provides DNR biologist's important data on overwinter losses of turkeys and deer, observation rates of ruffed grouse and coyotes as well as providing a forum for hunters to express their opinions and ideas. The data may provide accurate population trend information on white-tailed deer.

Hunters desiring a copy of the annual survey report need to participate in the survey. Spring gobbler hunters wanting to help are encouraged to contact Tammie Thompson, West Virginia Division of Natural Resources, P.O. Box 67, Elkins, WV 26241, phone 304-637-0245. Those wishing to participate will be sent necessary forms and a questionnaire prior to the spring hunting season. The survey is simple to conduct and a hunter does not have to harvest a gobbler to provide useful data. Most of the information collected deals with what hunters hear, see, or has an opinion on.

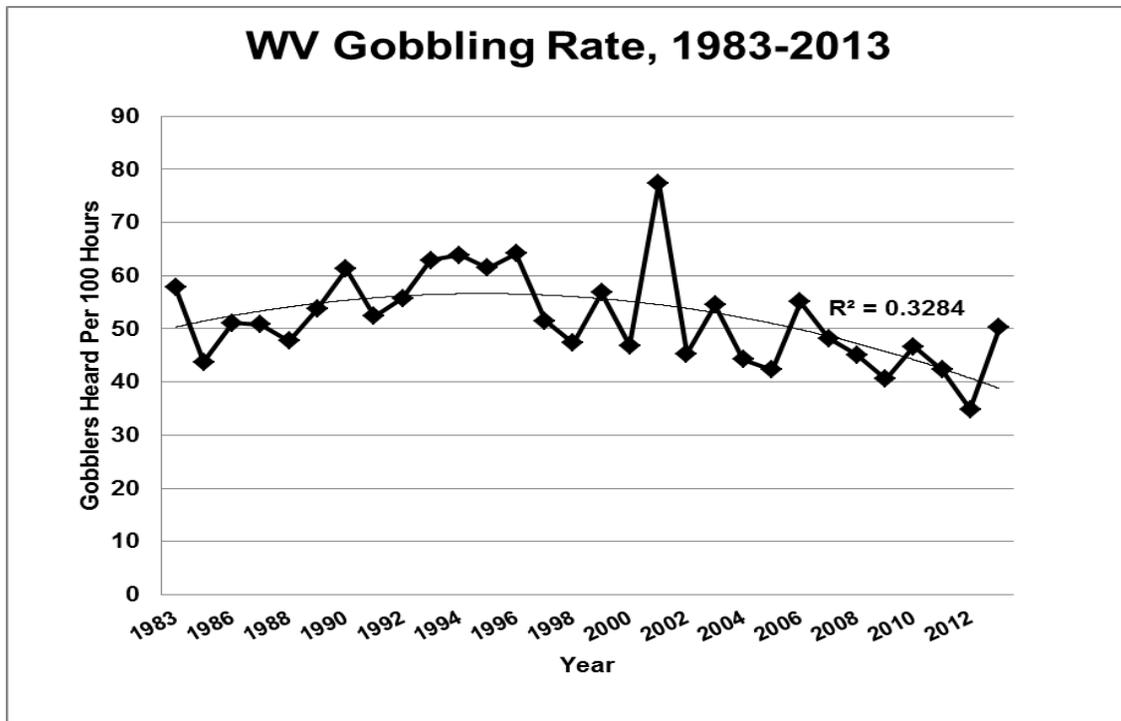


Figure 1. Gobblers heard per 100 hours by cooperators in West Virginia from 1983-2013.

Bowhunter Survey

Due to timing of the season and analysis of data, results from the Bowhunter Survey lag one year behind other surveys. This survey not only monitors white-tailed deer, it is also valuable in determining observation rates and predicting harvest trends of other wildlife species, including wild turkeys.

Turkey sightings by bowhunter cooperators during the fall of 2012 were 31 percent higher than in 2011 and only 2 percent less than the 18-year average. The last time observations were this high was ten years ago. These observations correlated well with the 2013 statewide spring harvest.

Brood Survey

Past studies have shown that the quantity of gobblers born two years prior to a spring turkey season is a pretty good forecaster of that spring's gobbler harvest. In the near term, the number of turkey broods observed helps inform the fall hunter outlook. Turkey brood observations were down slightly from last year and considerably below the 5-year average which one might expect given the amount of rainfall we had in June and July. Similar to other years, the highest number of broods was seen in July declining through the survey period; however, the magnitude of observations this year was less than the previous four. This survey correlated with the reduced fall harvest of 2013. In addition, we anticipate a reduced spring kill in 2015.

Mast Survey

Personnel from the Wildlife and Law Enforcement Sections of the Division of Natural Resources and the Division of Forestry have conducted surveys for abundance of wild foods since 1970. Mast from 18 tree and shrub species important to wildlife were monitored again this year. Compared to the 2012 survey, the 2013 mast index for all species combined was similar but the composition was different. The range in fluctuation depended on species with all oak mast species decreasing substantially. This decrease ranged from a low of 28 percent for shrub oak to 74 percent for chestnut oak. White and black/red oaks decreased greater than 50 percent. This year's index for beech was the third highest since the mast survey started in 1971, increasing 186 percent above 2012. Hickories and walnut increased 51 and 52 percent, respectively.

Among soft mast species, black cherry showed the greatest increase being 79 percent above last year's index. Crabapple and apple fared equally well increasing 77 and 76 percent, respectively. Greenbrier essentially remained the same increasing only five percent. Of the soft mast species, sassafras decreased the most from 2012 (29 percent).

The abundance (or lack thereof) of oak mast may remind many of the dismal mast crop of 2009. The combination of beech, hickory and walnut should help offset the lack of oak mast. Surveyors reported that although oak was scarce, oak abundance in the higher elevations was more plentiful, areas in excess of 2,800 feet were more likely to have decent acorn crops.

Table 1. Spring harvest of wild turkeys in West Virginia, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	209	157	160	182	162
Brooke	86	91	93	74	104
Hancock	98	109	107	92	110
Harrison	310	265	242	282	355
Marion	175	179	135	163	218
Marshall	214	316	253	224	300
Monongalia	215	257	218	221	262
Ohio	64	94	92	87	131
Preston	378	321	325	330	403
Taylor	101	86	76	93	103
Tucker	68	68	56	62	57
Wetzel	213	199	125	210	256
Dist. I Subtotal	2,131	2,142	1,882	2,020	2,461
Berkeley	83	89	86	88	98
Grant	121	102	102	114	129
Hampshire	194	149	119	120	124
Hardy	172	158	123	101	129
Jefferson	44	27	42	43	60
Mineral	135	121	78	86	87
Morgan	63	68	70	56	54
Pendleton	114	98	100	95	117
Dist. II Subtotal	926	812	720	703	798
Braxton	226	186	172	119	238
Clay	89	65	85	77	147
Lewis	241	237	201	181	221
Nicholas	157	163	166	161	221
Pocahontas	117	106	108	124	160
Randolph	198	197	142	94	217
Upshur	298	241	213	199	262
Webster	113	102	99	94	118
Dist. III Subtotal	1,439	1,297	1,186	1,049	1,584
Fayette	255	215	234	176	287
Greenbrier	266	226	253	235	299
McDowell	181	270	228	154	308
Mercer	215	175	186	146	177
Monroe	178	145	158	162	206
Raleigh	227	182	215	185	277
Summers	219	231	210	176	258
Wyoming	227	287	242	132	291
Dist. IV Subtotal	1,768	1,731	1,726	1,366	2,103
Boone	111	185	185	144	230
Cabell	157	236	134	129	138
Kanawha	219	261	311	214	332
Lincoln	183	278	188	157	213
Logan	160	194	169	133	246
Mason	419	551	445	343	370
Mingo	95	115	138	92	141
Putnam	256	323	236	196	225
Wayne	146	234	182	92	144
Dist. V Subtotal	1,746	2,377	1,988	1,500	2,039
Calhoun	129	120	96	138	179
Doddridge	135	150	121	111	138
Gilmer	147	135	137	132	191
Jackson	257	286	290	244	326
Pleasants	63	72	68	81	83
Ritchie	206	239	212	233	326
Roane	219	207	195	193	236
Tyler	167	196	135	133	211
Wirt	175	166	157	164	193
Wood	279	279	277	236	294
Dist. VI Subtotal	1,777	1,850	1,688	1,665	2,177
State Total	9,787	10,209	9,190	8,303	11,162

Table 2. Spring turkey harvest by locality in West Virginia, 2009-2013.

Land Type	Locality	2009	2010	2011	2012	2013
Monongahela NF	Beaver Dam	16	11	3	8	11
	Blackwater	17	21	8	14	13
	Cheat	14	11	7	2	6
	Cranberry	47	33	27	31	28
	Little River	26	22	29	31	35
	Neola	28	19	36	21	22
	Otter Creek	8	13	10	8	23
	Potomac	34	28	28	41	38
	Rimel	13	16	17	15	18
	Tea Creek	13	14	5	17	17
Monongahela NF Total		216	188	170	188	211
George Washington NF	Shenandoah	7	12	11	10	11
	Wardensville	52	17	24	15	25
George Washington NF Total		59	29	35	25	36
Jefferson NF		8	8	7	0	4
Jefferson NF Total		8	8	7	0	4
National River		21	7	9	7	22
National River Total		21	7	9	7	22
State Land	Allegheny	10	8	7	3	5
	Amherst/Plymouth	11	16	10	13	10
	Anawalt	5	5	6	4	3
	Bear Rocks	0	0	0	0	1
	Becky Creek	2	3	2	0	0
	Beech Fork	19	13	21	10	12
	Berwind	3	5	0	1	1
	Beury Mtn	8	3	5	2	5
	Big Ugly	2	2	1	1	0
	Bluestone	19	26	28	19	36
	Burnsville	12	14	12	12	30
	Cabwaylingo Sf	3	3	1	1	4
	Calvin Price Sf	0	4	5	1	5
	Camp Creek Sf	3	3	0	2	4
	Castleman	2	2	2	3	3
	Center Branch	1	0	0	1	2
	Conaway Run	0	2	0	0	2
	Coopers Rock Sf	10	13	3	6	12
	Cornstalk	19	22	23	14	28
	Cross Creek	2	6	6	3	7
	East Lynn	9	16	11	6	6
	Edwards Run	1	0	0	0	0
	Elk Creek	4	3	7	0	0
	Elk River	19	9	13	6	14
	Fork Creek	2	0	0	0	0
	Fort Mill Ridge	1	0	1	0	0
	Frozen Camp	3	1	4	0	3
	Greenbrier Sf	1	0	3	0	3
	Handley	0	1	0	0	3
	Hillcrest	11	14	21	11	8
	Horse Creek	1	3	0	0	0
	Hughes River	8	6	5	10	11

Table 2. Continued.

Land Type	Locality	2009	2010	2011	2012	2013
State Land	Huttonsville	1	0	1	0	0
	Kanawha Sf	7	8	14	8	10
	Kumbrabow Sf	2	5	4	1	4
	Laurel Lake	4	9	7	2	3
	Lewis Wetzel	5	3	2	10	9
	Little Indian Creek	1	3	2	3	2
	McClintic	16	15	13	15	11
	Meadow River	0	1	1	1	0
	Mill Creek	0	1	2	1	1
	Moncove	0	0	0	0	1
	Morris Creek	1	3	3	4	6
	Nathaniel Mnt	3	5	3	3	2
	O'Brien	0	0	1	0	0
	Panther Sf	7	11	12	3	16
	Pedlar	0	1	2	5	3
	Pleasants Creek	3	0	5	4	5
	Plum Orchard	2	0	1	5	9
	Pruntytown	2	2	5	0	1
	R D Bailey	24	47	5	3	18
	Ritchie Mines	6	7	3	3	4
	Sand Hill	2	0	3	1	2
	Seneca Sf	4	4	5	0	5
	Shannondale	3	1	4	3	9
	Short Mnt	3	3	8	2	3
	Sleepy Creek	16	13	21	19	16
	Snake Hill	0	1	3	4	0
	South Branch	1	0	0	0	0
	Stonecoal	3	2	6	1	1
	Stonewall Jackson	20	17	22	14	24
	Stumptown	0	1	0	0	0
	Summersville	6	6	3	4	3
	Tate Lohr	1	1	1	0	1
	The Jug	6	5	4	1	1
	Tug Fork	3	1	0	0	0
	Underwood	0	1	1	2	0
	Upper Mud River	4	1	1	1	0
	Wallback	6	1	5	8	6
	Widmyer	0	0	0	2	1
	Cotton Hill	0	0	0	0	11
	Teter Creek	0	0	0	0	1
State Land Total		353	382	370	262	407
Private Land		9,129	9,595	8,599	7,821	10,482
Unknown		1	0	0	0	0
State Total		9,787	10,209	9,190	8,303	11,162

Table 3. Spring wild turkey harvest in West Virginia by week of season, 2012-2013.

Week of Season	2012		2013	
	N	%	N	%
Youth	432	5%	563	5%
Week 1	4,642	56%	6,593	59%
Week 2	1,690	20%	2,036	18%
Week 3	976	12%	1,042	9%
Week 4	523	6%	876	8%
Unknown	40	0%	52	1%
State Total	8,303	100%	11,162	100%

Table 4. Fall harvest of wild turkeys in West Virginia, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	0	0	0	30	0
Brooke	14	6	6	7	9
Hancock	14	24	8	11	8
Harrison	25	0	20	26	20
Marion	0	12	0	15	4
Marshall	15	15	11	28	10
Monongalia	0	24	13	18	24
Ohio	7	16	12	12	9
Preston	83	80	76	63	77
Taylor	0	7	0	11	8
Tucker	25	28	17	25	14
Wetzel	0	9	0	14	2
Dist. I Subtotal	183	221	163	260	185
Berkeley	30	18	35	18	36
Grant	51	42	31	31	41
Hampshire	49	30	22	22	41
Hardy	58	33	27	30	34
Mineral	27	17	32	22	28
Morgan	24	14	18	5	13
Pendleton	51	38	38	46	26
Dist. II Subtotal	290	192	203	174	219
Lewis	0	12	22	0	8
Nicholas	116	46	61	98	39
Pocahontas	53	47	68	79	57
Randolph	75	58	142	77	59
Upshur	38	40	42	43	24
Webster	66	37	44	58	35
Dist. III Subtotal	348	240	379	355	222
Greenbrier	103	92	90	138	58
McDowell	0	16	0	0	33
Mercer	0	0	52	0	0
Monroe	105	59	63	89	71
Summers	0	36	31	73	42
Wyoming	0	31	0	0	37
Dist. IV Subtotal	208	234	236	300	241
Cabell	0	6	5	12	1
Lincoln	0	41	0	0	14
Mason	81	46	57	41	20
Putnam	0	38	21	21	2
Logan	0	0	0	0	17
Dist. V Subtotal	81	131	83	74	54
Calhoun	0	0	0	14	8
Gilmer	0	0	0	0	6
Jackson	0	19	33	39	18
Pleasants	0	2	2	5	4
Ritchie	0	12	0	0	2
Tyler	0	17	9	6	1
Wirt	36	21	34	23	19
Wood	61	37	43	44	20
Dist. VI Subtotal	97	108	121	131	78
Unknown	1	0	1	0	0
State Total	1,208	1,126	1,186	1,294	999

Table 5. Fall turkey harvest by locality in West Virginia, 2009-2013.

Land Type	Locality	2009	2010	2011	2012	2013
Monongahela NF	Beaver Dam	3	3	2	4	3
	Blackwater	9	9	3	9	2
	Cheat	2	2	5	1	1
	Cranberry	14	3	9	8	6
	Little River	14	11	18	13	13
	Neola	15	11	9	11	7
	Otter Creek	3	8	6	9	9
	Potomac	5	5	9	8	3
	Rimel	9	7	6	11	4
Tea Creek	5	2	12	7	7	
Monongahela NF Total		79	61	79	81	55
George Washington NF	Shenandoah	7	11	4	8	6
	Wardensville	10	5	8	6	5
George Washington NF Total		17	16	12	14	11
Jefferson NF	Potts Creek	1	0	0	0	0
Jefferson NF Total		1	0	0	0	0
National River	New River Gorge	0	0	1	0	0
National River Total		0	0	1	0	0
State Land	Allegheny	1	1	2	0	0
	Amherst/Plymouth	0	1	2	6	1
	Anawalt	0	0	0	0	1
	Bluestone	1	11	17	21	15
	Calvin Price SF	0	4	1	1	0
	Camp Creek SF	0	0	2	0	0
	Coopers Rock SF	0	1	0	0	2
	Cornstalk	7	3	3	3	0
	Cross Creek	2	0	2	0	1
	Edwards Run	1	0	1	0	0
	Fort Mill Ridge	0	0	0	1	0
	Frozen Camp	0	3	0	1	1
	Hillcrest	1	1	2	0	0
	Hughes River	1	0	1	1	1
	Kumbrabow SF	2	2	3	1	2
	Little Indian Creek	0	0	1	0	1
	McClintic	5	6	3	1	2
	Meadow River	0	0	1	0	0
	Mill Creek	0	0	0	1	0
	Nathaniel Mnt	0	0	0	1	0
	Panther SF	0	0	0	0	2
	Pleasants Creek	0	1	0	1	0
	R D Bailey	0	1	0	0	0
	Seneca SF	2	2	0	4	2
	Short Mnt	1	0	0	0	0
	Sleepy Creek	4	2	10	4	1
	South Branch	0	0	0	1	0
	Stonecoal	0	0	3	0	1
	Stonewall Jackson	0	0	3	0	1
	Summersville	2	1	0	1	0
	Tate Lohr	0	0	0	2	0
	Underwood	0	0	0	1	0
Widmyer	0	0	3	1	0	
Wilson Cove	0	0	0	0	1	
State Land Total		30	40	60	53	35
Private Land		1,081	1,009	1,034	1,146	898
State Total		1,208	1,126	1,186	1,294	999

Table 6. Fall wild turkey harvest in West Virginia by week of season, 2012-2013.

Week of Season	2012		2013	
	N	%	N	%
Opening Day	211	16%	168	17%
Week 1	636	49%	397	40%
Week 3	155	12%	211	21%
Week 4	149	12%	82	8%
Week 5	122	9%	123	12%
Unknown	21	2%	18	2%
State Total	1,294	100%	999	100%

Table 7. Total spring and fall wild turkey harvest, West Virginia, 1966-2013.

Year	Spring	Fall	Total	Rank
1966	12	1,334	1,346	47
1967	42	989	1,031	48
1968	134	1,697	1,831	46
1969	243	3,430	3,673	36
1970	370	3,020	3,390	39
1971	421	2,374	2,795	43
1972	589	2,353	2,942	42
1973	554	3,038	3,592	37
1974	596	2,158	2,754	44
1975	585	2,827	3,412	38
1976	721	1,860	2,581	45
1977	719	2,998	3,717	35
1978	566	2,803	3,369	40
1979	873	2,421	3,294	41
1980	1,459	3,696	5,155	32
1981	1,970	3,135	5,105	33
1982	2,458	5,684	8,142	28
1983	2,627	2,224	4,851	34
1984	3,387	2,414	5,801	31
1985	4,215	2,343	6,558	30
1986	4,774	3,130	7,904	29
1987	5,665	4,114	9,779	24
1988	6,526	2,939	9,465	26
1989	7,245	2,204	9,449	27
1990	9,152	3,504	12,656	15
1991	10,097	3,690	13,787	13
1992	11,299	3,518	14,817	8
1993	13,428	3,536	16,964	6
1994	15,501	3,351	18,852	4
1995	16,770	3,211	19,981	2
1996	16,618	2,870	19,488	3
1997	14,021	3,385	17,406	5
1998	12,467	1,678	14,145	11
1999	11,241	2,901	14,142	12
2000	12,794	1,541	14,335	10
2001	17,875	3,505	21,380	1
2002	13,385	2,808	16,193	7
2003	12,535	1,841	14,376	9
2004	10,573	1,357	11,930	18
2005	10,957	1,130	12,087	17
2006	11,735	1,186	12,921	14
2007	9,965	1,511	11,476	19
2008	9,929	1,206	11,135	21
2009	9,787	1,208	10,995	22
2010	10,209	1,126	11,335	20
2011	9,190	1,186	10,376	23
2012	8,303	1,272	9,575	25
2013	11,162	999	12,161	16
Total	335,744	118,705	454,449	

WILD BOAR

by
Travis G. Bowman

Hunters killed 49 boars during the 2013 season. This is slightly lower than the harvest of 62 in 2012 (Table 1). Acorns in the boar areas were very sparse, but hickory nuts were fairly plentiful in certain areas. With unfavorable oak mast conditions, boars should have been concentrated in areas with available mast leading to a higher harvest; however, the hunting conditions were not as favorable as 2012 (i.e., spotty mast conditions and ideal weather). West Virginia hunters, who preseason scouted and located high mast producing areas, were more successful in harvesting wild boars this season.

Firearms hunters (Table 2) took 27 boars (12 in Logan County and 15 in Boone County) and archers killed 22 (12 in Logan County and 10 in Boone County). Raleigh and Wyoming counties had no reported kills.

Boars were introduced in 1971 to supplement big game populations and did well enough to accommodate a hunting season in 1979. Harvests have ranged from 3 that year to 158 in 1995. The decline in the population since the late 1990's led to the removal of the December season in 2003. The single October firearms season is designed to reduce the harvest and to allow boars to move into unoccupied habitats. Traditionally, hunters have been less successful during October when weather conditions are warm and dry, and leaf fall makes boar sign more difficult to find.

Biologists do not believe that hunting contributed to the population decline. Hunting seasons have been short and hunter participation was restricted by permits. The main reason for fewer animals in Boone, Logan, Raleigh, and Wyoming counties is loss of habitat resulting in poor reproduction and survival. Impacts from mining and logging operations continue to decrease the mature oak-hickory forest favored by the boar.

Future boar harvests should be slightly lower than the 2012 season, but will fluctuate from year to year due to changing weather patterns and mast conditions. The good acorn crop of 2010 led to increased reproduction and a higher harvest in 2011, and then we saw an increase in harvest in 2012 due to favorable boar hunting conditions. The 2014 harvest should be slightly lower than 2013 in response to the poor oak mast conditions from this year. Wildlife personnel will continue to monitor the wild boar population and will make management recommendations accordingly.

Table 1. Wild boar harvest in West Virginia, 1979-2013.

Year	Total Kill
1979	3
1980	10
1981	33
1982	72
1983	54
1984	81
1985	58
1986	35
1987	74
1988	34
1989	116
1990	86
1991	59
1992	130
1993	82
1994	86
1995	158
1996	139
1997	141
1998	58
1999	96
2000	46
2001	43
2002	38
2003	5
2004	7
2005	12
2006	14
2007	22
2008	14
2009	35
2010	16
2011	37
2012	62
2013	49
Total	2005

Table 2. 2013 West Virginia wild boar harvest by weapon.

County	Archery	Gun	Total
Boone	10	15	25
Logan	12	12	24
Total	22	27	49

WHITE-TAILED DEER

By

JAMES M. CRUM

Deer Season 2013

The following Tables 1 through 9 contain the 2013 white-tailed deer hunter harvest information for each of West Virginia's 55 counties and the various public lands scattered across the state. In 2013, deer hunters harvested a total of 150,877 deer in the combined deer seasons. This is a 14% increase from the 2012 harvest and 9% more than the previous five-year harvest average of 138,713. The combined deer season harvest for 2013 is the 17th largest total deer harvest on record for West Virginia. The 2013 total deer harvest represents one deer killed for every 97 acres of deer habitat in the state (Table 9), and a 41% harvest decrease from the record harvest of 255,356 deer in 2002. From 1945 through 2013, a total of 5,891,325 deer have been recorded as harvested in West Virginia (Fig.1). Sixty percent (3,515,320) of the total recorded deer harvest of the past 68 years has occurred in the last 20 years.

WV DEER HARVEST 1945-2013

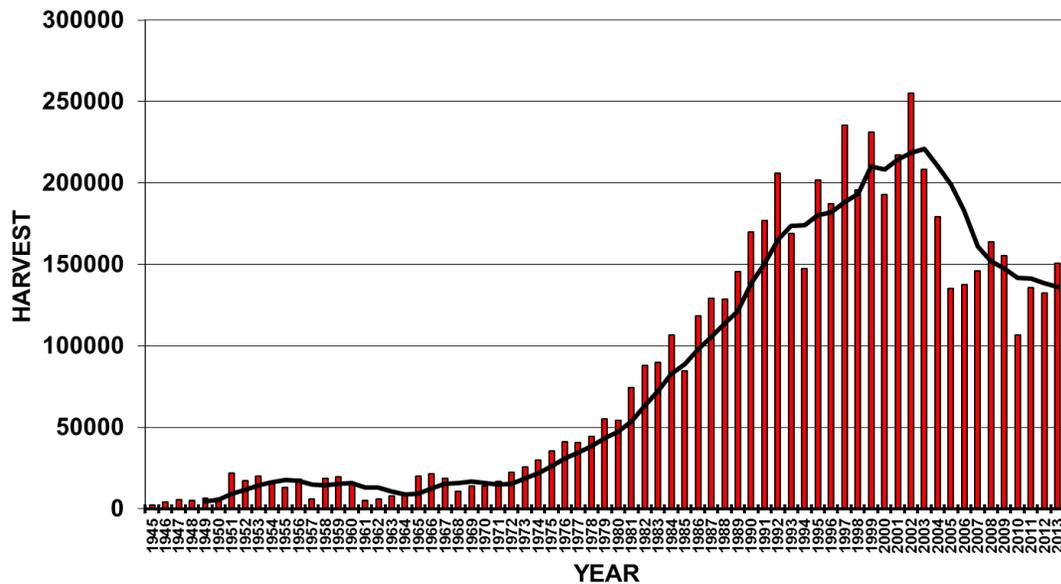


Figure 1. White-tailed deer harvest in West Virginia from 1945-2013.

In 2013, the traditional bucks-only firearm season harvest of antlered bucks was 56,523, an increase of less than 1% from the 2012 harvest (Table 1). This is 3% less than the five-year average bucks-only firearm season harvest of 58,070 and ranks 27th among all past years.

The 2013 antlerless deer harvest taken with a firearm increased by 26% from that of 2012 but was 46% less than the record harvest of 104,199 recorded in 2002. A total of 56,636 antlerless deer (Table 5) were taken with a firearm during the antlerless deer season and the Youth, Class Q/QQ and Senior Lifetime Class XS deer season. This year marked the second year for a three-day October firearm antlerless deer season and a reduction of the traditional December antlerless season from six to three days that was moved to follow muzzleloader season in mid-December (December 19-21). The antlerless deer maximum season bag limit was decreased from 4 to 3 in 2012 but was unchanged for 2013. In comparison to 2012, the antlerless bag limit in 2013 was increased in 9 counties, and portions of four counties. The firearm antlerless deer season was open in 2013 for 21 days on private land in 51 counties or portions thereof. In 4 counties and portions of six more, the season was closed. Of the counties open for antlerless deer hunting to resident and nonresident hunters, 34 counties and portions of two counties had a bag limit of three antlerless deer, and 9 more counties and portions of eight counties had a bag limit of one antlerless deer. Four counties and portions of six counties in 2013 were limited to resident and nonresident hunters who had to apply for limited permits. The antlerless season was closed on a large portion of National Forest land. However, compared to 2012, antlerless deer hunting opportunities on National Forest and other public land in 2013 were increased and resident and nonresident hunters could apply for limited permits on public lands in Pocahontas, Randolph and Pendleton counties (Table 6). Qualifying youth, Class Q/QQ (physically challenged) and Senior Lifetime Class XS license holders had an additional three-day antlerless-only season on private and public land in counties having a firearms deer hunting season. The 2013 special split deer season for youth, Class Q/QQ and Senior Lifetime Class XS hunters was the sixth year for the season to be open on private land in all 51 counties open to a deer firearms season, the second year that all public lands in the 51 counties were open and also the second year that Senior Lifetime Class XS license holders could participate. The 2013 antlerless season harvest was 15th highest on record and 23% more than the five-year average antlerless harvest of 46,121.

The 2013 deer archery season opened September 28, 2013, one day earlier than the 2012 season and two weeks earlier than any season prior to 2011. In the 2013 archery season, a harvest of 29,979 was recorded which includes 1,587 deer harvested during the archery season with a crossbow. Deer reported as harvested with a crossbow represented 5% of the total archery season harvest and ranged from 2% to 13% of archery harvest of antlered deer by county. This year's archery harvest was an increase of 16% from the 2012 archery season but was 8th highest on record and 11% above the five-year average of 27,007 (Table 3).

The 2013 muzzleloader season harvest was 7,739, an increase of 44% from 2012. This is 3% above the five-year average harvest of 7,515, and the 19th highest harvest recorded for this season (Table 7). Major changes to the muzzleloader season that occurred in 2012 remained in place for 2013. In 2012 the early 6-day special antlerless muzzleloader deer season in September was dropped and the traditional mid-December portion of the season was moved to early December opening the Monday following the close of buck firearm season

In 2013, hunting on Sunday was permissible in West Virginia for the thirteenth year since 1956. In 2001, all counties were open to hunting on Sunday. In 2002, a total of 20 counties were open to hunting on Sunday. From 2003 through 2013, there were 14 counties open to hunting on Sunday. These 14 counties had 11 additional days available for deer hunting in 2013 deer seasons. All eleven days were open for archery hunters who recorded taking 861 deer on Sundays, or 3% of the total 2013 archery harvest. One Sunday was open for firearms deer hunting (the Sunday after Thanksgiving December 1st), and 431 deer were recorded as harvested.

In the 2013 deer season, 51 counties were open to the two-week bucks-only season. The desired buck harvest per square mile was exceeded by more than one buck per square mile in ten counties representing 12% of the deer habitat in the state. There were two counties, with a buck harvest one buck per square mile lower than the desired harvest. For the remaining 39 counties, the buck harvest was within one buck per square mile of the desired harvest for the county. In contrast to 2012, six counties exceeded the desired buck harvest per square mile by at least one buck per square mile and no counties were lower than the desired harvest while 45 counties were within one buck per square mile of the desired buck harvest.

The harvest of antlerless deer is the key to healthier, heavier, and more productive deer herds. This is because there are natural limits to the number of deer the land can support. When these natural limits are exceeded, deer body weights, reproductive rates, antler development, and herd health declines, including an increased likelihood that deer will die over winter. If deer exceed natural limits long enough, habitat quality is reduced which produces a long-term reduction in the natural limit of deer the land can support. To avoid these problems a minimum of 70 females for every 100 bucks is generally required just to stabilize a deer herd. If a decrease in the herd is warranted, the percentage of females needs to be above 40%. Figure 2 depicts the total deer harvest in West Virginia from 1993 through 2013 by the sex composition of the harvest for each year in relation to the percentage of female deer harvested. This figure appears to reflect the stabilizing effect the 40% female harvest has on the number of deer harvested. The 2013 deer harvest records indicate the percentage of female deer in the harvest for 2013 was 45% which is expected to decrease the deer herd.

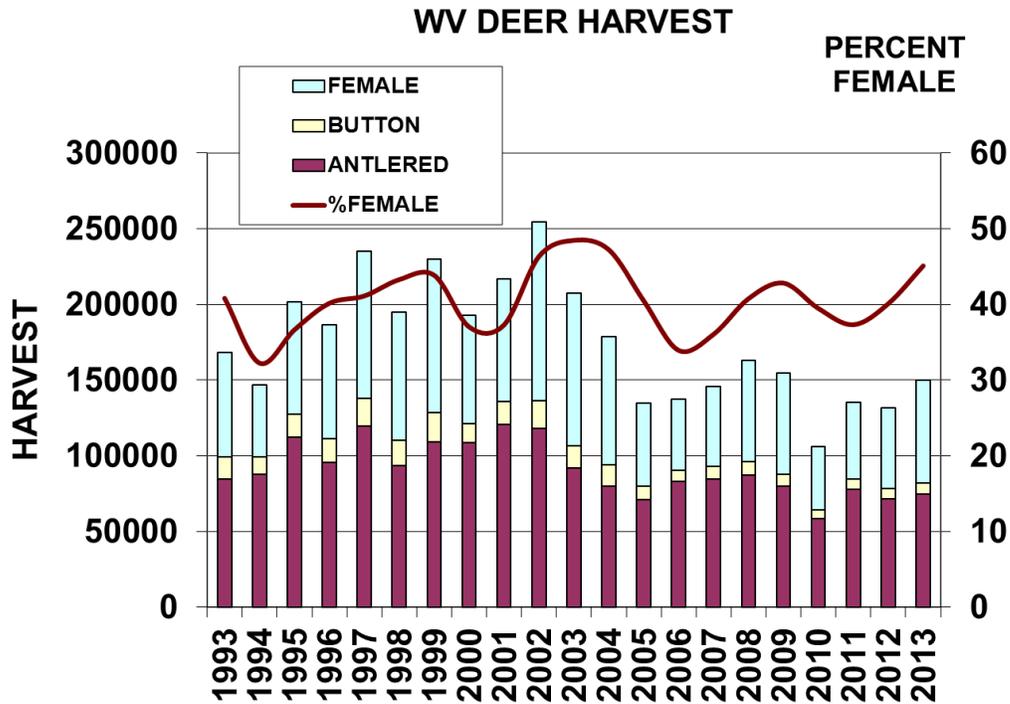


Figure 2. Deer harvested by sex in West Virginia from 1993-2013.

Over the last 10 years the yearly average number of reported antlered bucks harvested during all deer seasons has been three antlered bucks per square mile of deer habitat in West Virginia. Hunters and landowners must continually assess their expectations of the proper number of deer sightings versus the visible impacts deer have on vegetation, and manage the state’s deer herd by participating and encouraging antlerless deer harvest where needed to benefit not only the deer herd, but all wildlife dependent on our state’s woodland habitat and conversely reduce antlerless deer harvest to stabilize or increase deer populations.

Special Deer Management Areas

Hunters took 1,043 deer in the special urban deer season in 2013. This special archery deer hunting season is available to incorporated cities and homeowner associations, which may open three weeks prior to the opening of the Statewide deer archery season. During this special season, seven deer may be taken which do not count toward the regular archery deer season bag limit. In 2013, 13 cities (Alderson, Barboursville, Bethlehem, Bridgeport, Charleston, Harpers Ferry, Harrisville, Morgantown, North Hills, Parkersburg, South Charleston, Weirton, and Wheeling) reported harvesting 800 deer, which are included in Tables 3, 4, 8, and 9. In addition, 243 deer were harvested during urban deer archery hunts conducted by eight

homeowner associations. This is the tenth year that homeowner associations have taken advantage of the special urban archery deer season to address deer population management. The Whiting's Neck Farm Estate was the first homeowner's association to use this special archery season. They have continued to use this season to safely and economically manage deer numbers for the past ten years. For information regarding implementing a special season contact your local city government or homeowner's association.

In the special split Youth, Class Q/QQ and Senior Lifetime Class XS deer season, a total of 4,038 antlerless deer were harvested and are included in antlerless deer harvest tables 5, 6, 8, and 9. This season was open on private land and public land in any county open to a firearms deer season on October 19, 2013, and again December 26 and 27, 2013. This was the 16th year a Youth special season was held. To participate, hunters had to hold a Class Q license, or be a youth at least eight and less than 18 years of age on the day of the season, or possess a Senior Lifetime Class XS license. Youth hunters, age 8-14, must be accompanied by a licensed adult at least 21 years of age and youths age 15-17 must comply with all regular season license requirements for junior sportsman hunting or hunt with resident landowner privileges. The 2013 season was the fourth year for participation by the 15 -17 age youths and the second year for participation by Class XS license holders. The daily bag limit was one antlerless deer, which did not count against the hunter's annual antlerless deer season bag limit. Hunters harvested 2,724 deer on the first day, October 19th and an additional 629 and 685 deer on December 26th and 27th, respectively. Overall the harvest for the 2013 special Youth, Class Q and Senior Lifetime Class XS deer season increased 28% from 2012. The harvest for the 2013 first day was up 18% from the first day of the 2012 season and the second and third days of the 2013 season were up 55% from the reported harvest in 2012.

Special controlled deer hunts were held in 2013 at the National Radio Astronomy Observatory (NRAO), Stonewall Jackson State Park and on Blennerhassett Island State Park. Nineteen deer were harvested on the NRAO property during a two-day hunt October 18 and 19, 2013. Hunters at the three-day Stonewall Jackson State Park hunt, November 18, 19 and 20, 2013, harvested 106 deer. Forty-three deer were harvested by 97 hunters on Blennerhassett Island State Park during a two-day controlled hunt November 12 and 14, 2013. It is anticipated that controlled deer hunts on these areas and additional state park land will be held in the future. Deer are a keystone species in West Virginia's natural world and proper stewardship of our State's flora and fauna require that deer management be addressed on all lands.

Nonseasonal Mortalities

Nonseasonal mortalities are those deer deaths that are not associated with the harvest of deer by hunters. Figure 3 depicts nonseasonal deer mortalities that are associated with human/deer conflicts (i.e., vehicle collisions and crop damage). The

public, DNR Natural Resource Police Officers, and DNR Wildlife Resources personnel routinely report nonseasonal mortalities. The WV Department of Transportation,

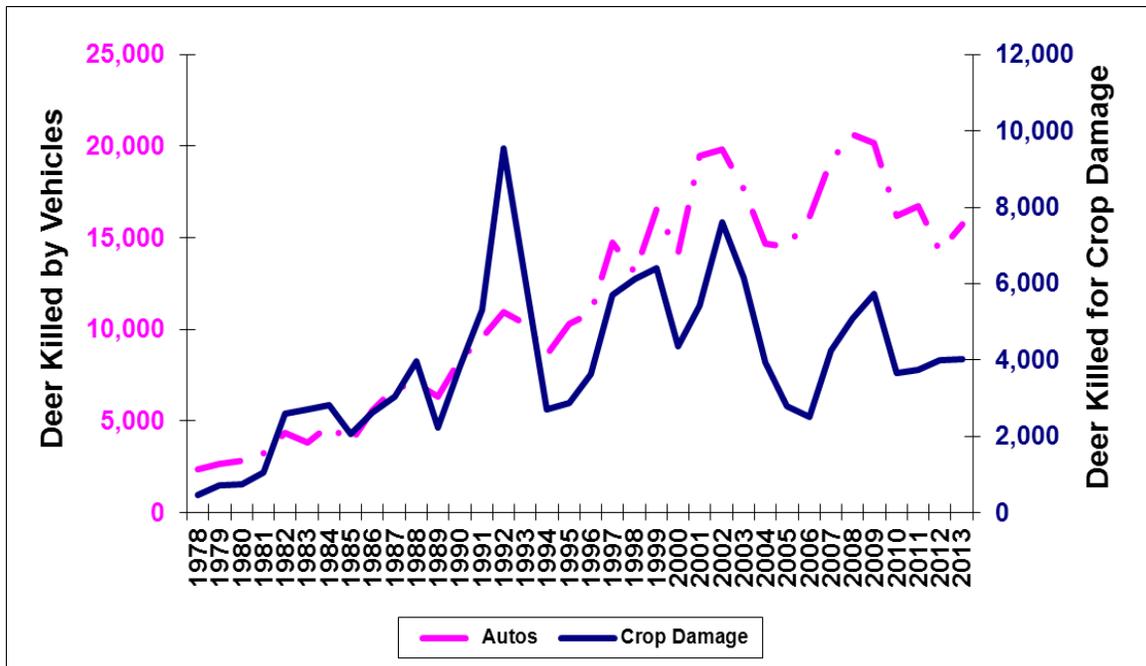


Figure 3. Vehicle and crop damage kills in West Virginia from 1978-2013.

Division of Highways (DOH) -Traffic Engineering Division, provides monthly summaries of vehicle killed deer that are encountered by DOH personnel. DNR Natural Resource Police Officers provide wildlife damage investigation reports from which the number of deer killed for crop damage is obtained.

The reported nonseasonal mortalities from vehicle collisions, crop damage and other causes increased 13% from 18,264 in 2012 to 19,721 in 2013. Deer killed on crop damage permits decreased in three DNR Districts and increased in three DNR Districts. Overall, deer killed through the crop damage permit system in 2013 remained almost same as 2012, with 4,001 deer killed on crop damage permits in 2012 and 4,014 recorded in 2013. Reported vehicle kills increased statewide by 10% in 2013, from 14,263 in 2012 to 15,707 in 2013. Percent change by DNR Districts 1, 2, 3, 4, 5, and 6 were -4%, +44%, +3%, +7%, -20%, and +16%, respectively.

The occurrence of deer reportedly killed by collisions with vehicles and deer reported as killed for crop damage follow similar trends. Although other factors such as deer food supply (such as acorns), number and average speed of vehicles, and crop growing conditions like drought influence these trends, a major factor is deer population (Fig. 3).

Deer Hunting Outlook

Overall deer hunting opportunities for hunters across the state in 2014 are proposed to be similar to those in 2013. The substantial changes made in 2012 and continued in 2013, to the deer season framework as recommended in the revised White-tailed Deer Operational Plan completed in late December 2011 are proposed to remain in place for the 2014 deer season. In general, these changes aim to increase the diversity of deer hunting opportunities, simplify hunting regulations, better distribute antlerless deer harvest to meet deer population goals and limit conflict among wildlife resource user groups. The revised White-tailed Deer Operational Plan also includes expanded efforts to monitor the deer herd through the collection of biological information at official game checking stations across the state. In the 2013 deer seasons, DNR personnel examined 3,262 deer from 28 counties to determine age composition of the antlered buck harvest and found 34% of the bucks were yearlings and 26% were 3.5 years of age and older. Expanded tracking of the age composition of the buck harvest and other biological parameters of the deer herd will continue in 2014.

The 2014 deer archery season opening date is proposed to open the last Saturday in September (September 27th) which is similar to the opening date in 2012 (September 29th) and 2013 (September 28th). Uniform and more liberal deer bag limits and season lengths for the urban archery deer seasons available to incorporated cities and homeowner associations put in place for the fall of 2012 are proposed to remain available in 2014. The more liberal bag limit and earlier opening available for the season has provided incorporated cities and homeowner associations a reliable and efficient method to address locally over abundant deer populations.

The 2014 muzzleloader deer season is proposed to open the Monday following the end of the two-week buck firearm season (December 8, 2014). Antlerless deer hunting opportunities for the 2014 muzzleloader season are proposed to be similar to the 2012 muzzleloader deer season regulations. In counties with unlimited Class N/NN antlerless deer permits and an antlerless Class N/NN season bag limit of one or more, hunters would be able to take two deer of either sex during the muzzleloader season, provided the second muzzleloader deer is taken on an additional muzzleloader deer stamp (RM for residents and RMM for nonresident hunters). In counties with limited lottery Class N/NN antlerless season and a one antlerless deer Class N/NN season bag limit, hunters in the 2013 muzzleloader season can take one deer of either sex but the second muzzleloader season deer taken on the RM or RMM additional muzzleloader deer stamp can only be an antlered deer, provided the hunter has not filled the maximum annual bag limit (excluding special urban archery hunts) of three antlered bucks.

In 2014 50 counties or portions thereof, are proposed to have a Class N/NN antlerless deer season for 21 days on private land and selected public lands. A three-day October Class N/NN antlerless deer season is again proposed for the fall of 2014.

The three-day October Class N/NN antlerless deer season in 2013 accounted for 16% of the total recorded Class N/NN antlerless deer season harvest up from the 9% recorded in the three-day October Class N/NN antlerless season in 2012. Thirty-four counties and portions of five counties are proposed to have a three antlerless deer bag limit. Eight counties and portions of seven counties are proposed to have a one antlerless deer bag limit. Again, as in 2013, a split three-day Special Youth, Class Q/QQ and Senior Lifetime Class XS deer season is proposed to be held on October 18th and December 26th and 27th on private and public lands in the 51 counties open to firearms deer season. This season **would be closed** in Logan, Mingo, McDowell, or Wyoming counties. In addition, as in 2013, senior lifetime license holders (Class XS) will be eligible to participate in this split special three-day Special Youth Class Q/QQ and Senior Lifetime License holder antlerless deer only season.

In 23 counties during the 2013 deer seasons, hunters had to harvest an antlerless deer before taking a second antlered buck during archery and gun seasons, respectively. This regulation is proposed again for the 2014 season for 29 counties and portions of 2 counties to encourage deer hunters to harvest antlerless deer but not penalize those that wish to only harvest one antlered buck. Please refer to the 2014-2015 Hunting and Trapping Regulations Summary for further details on all deer hunting seasons because the above proposed seasons and bag limits have not been approved by the Natural Resources Commission at this time. White-tailed deer hunting season regulations for 2014 will be published and available to hunters in July of 2014. This newsprint-like pamphlet contains complete information on gun, archery, muzzleloading, and antlerless deer hunting, plus other hunting regulations on turkey, bear, boar, and small game. Hunters will be able to obtain a copy from any DNR office or any business that sells West Virginia hunting licenses or visit the Wildlife Resources Section on the web at www.wvdnr.gov.

Efforts to control the spread and monitor chronic wasting disease (CWD) in free-ranging deer in Hampshire and Hardy Counties by DNR, landowners, and hunters are ongoing. In the 2013 deer seasons, samples from 591 hunter-harvested deer brought to game checking stations in Hampshire County, two stations in northern Hardy County and one station in northern Morgan County were tested for CWD. Twenty-nine samples were found to have the abnormal protein associated with CWD. CWD has now been detected in a total of 159 deer in Hampshire County and three deer in Hardy County. Lowering encounter rates between infected and non-infected animals by prohibiting artificial supplemental feeding and baiting are generally accepted management practices for slowing the spread of an infectious disease among wildlife and initiating these prohibitions on a statewide or regional basis for deer is a major tool used by other states combating CWD. Currently (March 2014) in West Virginia all of Hampshire County, the northern and eastern portion of Hardy County north of Corridor H (U.S. Rt. 48) and/or east of State Rt. 259 to the Virginia state line, and the portion of Morgan County west of U.S. Route 522 has regulations prohibiting the baiting and feeding of deer. The Virginia Department of Game and Inland Fisheries and the Maryland Department of Natural Resources have detected CWD positive deer adjacent to Hampshire County in Frederick

and Allegany counties respectively. Considering the CWD management actions available, documented disease transmission risks associated with artificial supplemental feeding and baiting of deer and the current known distribution of CWD in West Virginia, it would be wise to prohibit and discourage the artificial supplemental feeding and baiting of deer in Hampshire County and in the surrounding counties of Grant, Hardy, Mineral, and Morgan. Additionally, a well-documented method of spreading CWD across long distances is the movement of live species of deer for commercial purposes. Many organizations such as the Quality Deer Management Association, Rocky Mountain Elk Foundation, and The Wildlife Society have recognized the threat the pen propagation and translocation of deer species represent to the wild deer and elk resources that are enjoyed by all citizens. This threat is not only from CWD but also from the introduction of other pathogens and genetic consequences, which have the potential to devastate our revered deer resource. For more information on CWD and the current status of the disease in West Virginia contact any DNR office or visit the Wildlife Resources Section on the web at www.wvdnr.gov.

Table 1. West Virginia antlered buck harvest, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	1,307	875	1,372	1,177	1,109
Brooke	377	337	413	407	389
Hancock	339	299	324	320	273
Harrison	1,730	1,053	1,494	1,385	1,301
Marion	1,183	764	1,249	1,089	1,130
Marshall	1,321	1,087	1,407	1,309	1,051
Monongalia	1,536	1,116	1,508	1,297	1,107
Ohio	412	412	467	466	399
Preston	2,122	2,034	2,224	2,158	1,741
Taylor	727	494	768	684	635
Tucker	874	743	738	649	527
Wetzel	1,474	958	1,615	1,471	1,537
Dist. I Subtotal	13,402	10,172	13,579	12,412	11,199
Berkeley	651	661	835	767	871
Grant	1,228	959	1,266	1,250	1,135
Hampshire	1,634	1,271	1,676	1,588	1,846
Hardy	1,601	1,315	1,589	1,429	1,447
Jefferson	461	482	447	526	445
Mineral	1,158	947	1,286	1,181	1,345
Morgan	573	457	601	602	743
Pendleton	1,257	893	1,391	1,373	1,163
Dist. II Subtotal	8,563	6,985	9,091	8,716	8,995
Braxton	1,891	986	1,468	1,401	1,626
Clay	552	353	519	528	475
Lewis	2,227	1,130	1,586	1,365	1,692
Nicholas	1,176	846	1,279	1,212	824
Pocahontas	1,346	1,100	1,106	1,152	961
Randolph	1,930	1,858	2,032	1,804	1,329
Upshur	1,383	1,088	1,612	1,283	1,396
Webster	901	807	1,063	817	717
Dist. III Subtotal	11,406	8,168	10,665	9,562	9,020
Fayette	896	742	1,005	996	835
Greenbrier	1,976	1,367	1,783	1,875	1,509
Mercer	604	362	647	682	536
Monroe	1,569	1,002	1,364	1,569	1,466
Raleigh	706	446	739	749	579
Summers	931	536	865	1,077	973
Dist. IV Subtotal	6,682	4,455	6,403	6,948	5,898
Boone	628	471	653	898	725
Cabell	695	464	705	750	763
Kanawha	1,257	896	1,275	1,164	1,380
Lincoln	860	747	1,146	1,319	1,124
Mason	2,099	1,298	1,944	1,676	1,495
Putnam	1,065	794	1,170	1,191	1,210
Wayne	880	570	894	1,041	870
Dist. V Subtotal	7,484	5,240	7,787	8,039	7,567
Calhoun	1,124	570	962	770	1,164
Doddridge	1,416	767	1,000	950	1,243
Gilmer	1,398	701	1,029	911	1,427
Jackson	2,504	1,225	1,962	1,630	1,917
Pleasants	531	332	512	371	438
Ritchie	2,010	1,195	1,701	1,512	2,091
Roane	2,112	1,049	1,694	1,391	1,893
Tyler	1,210	833	1,189	922	1,000
Wirt	1,265	659	944	846	1,091
Wood	1,879	1,110	1,639	1,403	1,580
Dist. VI Subtotal	15,449	8,441	12,632	10,706	13,844
State Total	62,986	43,461	60,157	56,383	56,523

Table 2. Antlered buck gun harvest by locality in West Virginia, 2009-2013.

Area	Locality	2009	2010	2011	2012	2013
Monongahela NF	Beaver Dam	84	74	53	70	31
	Blackwater	168	164	119	152	106
	Cheat	111	109	100	89	61
	Cranberry	209	184	119	137	90
	Little River	273	252	181	240	153
	Neola	125	110	110	107	72
	Otter Creek	144	112	95	122	61
	Potomac	305	244	256	293	198
	Rimel	115	120	84	91	87
Tea Creek	74	70	47	80	47	
Monongahela NF Total		1,608	1,439	1,164	1,381	906
George Washington NF	Cove Creek	0	0	0	1	0
	Shenandoah	38	47	68	72	49
	Wardensville	151	150	139	161	114
	Wilson Cove	0	2	0	0	0
George Washington NF Total		189	199	207	234	163
Jefferson NF	Potts Creek	39	50	22	42	42
Jefferson NF Total		39	50	22	42	42
State Land	Allegheny	6	4	9	12	7
	Amherst/Plymouth	15	17	31	26	27
	Bear Rocks	1	3	0	5	6
	Becky Creek	2	16	4	2	2
	Beech Fork	13	3	10	18	15
	Beury Mtn	14	13	7	19	14
	Big Ditch	1	0	0	4	0
	Big Ugly	15	17	21	22	9
	Bluestone	17	16	23	22	28
	Briery Mnt	0	6	0	0	0
	Burnsville	21	7	16	23	28
	Cabwaylingo Sf	2	3	2	7	8
	Calvin Price Sf	2	5	5	5	2
	Camp Creek Sf	17	5	7	14	9
	Castleman Run	12	8	5	5	11
	Center Branch	9	3	3	4	3
	Conaway Run	8	2	6	3	8
	Coopers Rock Sf	16	19	14	26	20
	Cornstalk	72	61	68	91	66
	Cotton Hill	0	0	0	1	0
	Cross Creek	23	20	21	20	36
	Dents Run WMA	0	2	0	3	14
	Dunkards Fork	0	0	1	1	1
	East Lynn	8	14	12	20	10
	Edwards Run	1	5	4	3	7
	Elk Fork	0	0	0	4	2
	Elk River	55	42	67	74	67
	Fork Creek	1	0	0	0	0
	Fort Mill Ridge	2	1	1	0	0
	Fox Forest	0	2	0	0	0
	Frozen Camp	25	12	9	22	32
	Green Bottom	2	2	3	1	2
	Greenbrier Sf	9	11	14	14	9
	Handley	3	4	2	3	2
	Hilbert	0	0	2	3	1
	Hillcrest	0	0	1	0	0
Hughes River	54	31	43	37	39	

Table 2. Continued.

Area	Locality	2009	2010	2011	2012	2013
State Land	Huttonsville	4	6	8	3	1
	Kanawha Sf	16	26	20	29	18
	Kumbrabow Sf	16	11	13	15	8
	Lantz Farm	0	0	0	0	3
	Lewis Wetzel	70	46	63	127	85
	Little Indian Cr	2	0	5	6	8
	McClintic	9	5	6	12	8
	Meadow River	7	4	3	3	3
	Mill Creek	1	1	1	2	0
	Moncove	8	6	9	11	17
	Morris Creek	10	6	8	18	6
	Nathaniel Mnt	47	30	31	50	26
	New River Gorge	32	0	0	0	0
	Pedlar	8	7	5	3	3
	Pleasants Creek	7	3	2	18	8
	Plum Orchard	8	1	1	4	1
	Pruntytown	11	3	7	11	11
	Ritchie Mines	3	7	7	3	11
	Sand Hill	0	0	0	9	8
	Seneca Sf	32	25	23	35	21
	Shannondale	12	16	15	24	20
	Short Mnt	43	49	39	36	29
	Sleepy Creek	69	77	126	116	91
	Smoke Camp	2	0	0	1	5
	Snake Hill	7	5	12	10	11
	South Branch	1	3	0	1	2
	Stonecoal	24	11	8	16	22
	Stonewall Jck	170	95	88	111	131
	Stumptown	8	0	0	1	10
	Summersville	12	8	5	7	12
	Sutton Res	14	1	5	0	0
	Tate Lohr	1	0	1	0	0
	Teter Creek	1	1	1	0	0
	The Jug	16	12	7	19	12
	Thorn Creek	1	0	0	0	0
	Underwood	9	17	18	4	8
Upper Mud River	3	3	3	8	1	
Wallback	27	6	13	16	17	
Widmyer	1	0	0	1	0	
Woodrum	0	0	0	1	0	
State Land Total		1,138	845	964	1,245	1,102
Private Land		60,002	40,926	57,800	53,463	54,301
Unknown		10	2	0	18	9
State Total		62,986	43,461	60,157	56,383	56,523

Table 3. West Virginia white-tailed deer archery harvest, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	522	429	509	383	544
Brooke	297	215	259	312	271
Hancock	419	343	377	439	432
Harrison	572	466	544	653	658
Marion	494	366	516	484	541
Marshall	409	392	393	406	382
Monongalia	685	691	776	779	785
Ohio	227	213	255	318	304
Preston	1,213	1,140	1,322	1,140	1,069
Taylor	286	273	287	285	266
Tucker	431	407	405	295	332
Wetzel	353	222	326	292	418
Dist. I Subtotal	5,908	5,157	5,969	5,786	6,002
Berkeley	457	374	436	419	639
Grant	453	301	404	355	402
Hampshire	317	179	245	256	393
Hardy	441	269	358	287	396
Jefferson	361	354	382	392	425
Mineral	323	238	351	303	398
Morgan	225	164	159	146	274
Pendleton	372	233	367	293	326
Dist. II Subtotal	2,949	2,112	2,702	2,451	3,253
Braxton	661	400	520	412	589
Clay	309	209	240	253	299
Lewis	610	352	433	376	517
Nicholas	842	652	883	701	753
Pocahontas	408	348	402	325	345
Randolph	1,048	1,011	1,163	781	786
Upshur	603	472	748	488	627
Webster	628	528	728	520	436
Dist. III Subtotal	5,109	3,972	5,117	3,856	4,352
Fayette	752	516	791	722	806
Greenbrier	832	556	738	758	661
McDowell	609	412	464	571	699
Mercer	547	331	589	574	667
Monroe	645	370	551	534	661
Raleigh	718	595	812	899	876
Summers	526	335	484	538	543
Wyoming	681	560	772	765	1,062
Dist. IV Subtotal	5,310	3,675	5,201	5,361	5,975
Boone	380	349	317	442	485
Cabell	387	303	357	389	436
Kanawha	939	723	884	872	1,041
Lincoln	428	418	467	558	535
Logan	729	469	591	753	841
Mason	778	691	788	666	789
Mingo	329	259	284	368	490
Putnam	542	446	561	539	663
Wayne	326	311	307	388	406
Dist. V Subtotal	4,838	3,969	4,556	4,975	5,686
Calhoun	299	202	241	212	353
Doddridge	279	167	217	204	284
Gilmer	348	200	280	212	403
Jackson	795	505	669	600	783
Pleasants	108	84	116	95	114
Ritchie	486	390	473	377	489
Roane	632	400	484	418	643
Tyler	272	258	298	256	326
Wirt	391	274	332	299	405
Wood	758	597	749	676	911
Dist. VI Subtotal	4,368	3,077	3,859	3,349	4,711
State Total	28,482	21,962	27,404	25,778	29,979

Table 4. Deer archery harvest by locality in West Virginia, 2009-2013.

Area	Locality	2009	2010	2011	2012	2013
Monongahela NF	Beaver Dam	42	24	34	17	11
	Blackwater	96	80	45	41	53
	Cheat	39	40	34	23	14
	Cranberry	84	72	93	57	40
	Little River	99	89	71	59	57
	Neola	24	13	9	14	14
	Otter Creek	30	45	43	25	27
	Potomac	134	82	85	69	78
	Rimel	12	22	10	11	11
	Tea Creek	13	13	13	10	14
Monongahela NF Total		573	480	437	326	319
George Washington NF	Shenandoah	11	10	14	12	6
	Wardensville	31	24	23	21	27
George Washington NF Total		42	34	37	33	33
	Potts Creek	9	9	8	8	4
Jefferson NF Total		9	9	8	8	4
State Land	Allegheny	1	4	8	3	0
	Amherst/Plymouth	4	2	6	7	4
	Anawalt	1	3	1	1	4
	Bear Rocks	3	1	1	3	3
	Becky Creek	2	7	1	0	1
	Beech Fork	9	5	4	15	10
	Berwind	3	1	0	2	5
	Beury Mtn	16	6	14	13	11
	Big Ditch	2	1	1	2	3
	Big Ugly	4	2	5	5	0
	Bluestone	27	20	39	28	26
	Briery Mnt	1	0	1	0	0
	Burnsville	31	19	24	18	23
	Cabwaylingo Sf	2	2	1	4	1
	Calvin Price Sf	2	0	4	0	0
	Camp Creek Sf	3	0	7	5	10
	Castleman Run	3	2	4	9	3
	Center Branch	3	3	4	2	0
	Chief Logan WMA	0	0	2	0	2
	Conaway Run	0	2	0	3	2
	Coopers Rock Sf	7	13	10	8	16
	Cornstalk	31	39	30	37	51
	Cross Creek	6	4	4	5	1
	Dents Run WMA	0	1	0	3	0
	East Lynn	5	5	0	2	2
	Edwards Run	0	0	2	2	0
	Elk Creek	12	6	2	12	4
	Elk River	37	35	24	19	32
	Fork Creek	1	0	1	0	0
	Fort Mill Ridge	0	0	0	1	0
	Frozen Camp	2	4	0	5	5
	Graystone	60	0	0	0	0
	Green Bottom	4	5	3	3	6
	Greenbrier Sf	2	2	5	0	2
	Greystone	11	0	0	0	0
	Handley	0	1	1	0	0
Hilbert	0	0	1	0	0	
Hillcrest	7	17	15	9	14	
Hughes River	5	10	12	8	12	
Huttonsville	1	4	1	1	2	
Kanawha Sf	4	10	7	12	8	
Kumbrabow Sf	6	5	2	3	2	

Table 4. Continued.

Area	Locality	2009	2010	2011	2012	2013
State Land	Laurel Lake	9	8	8	3	13
	Lewis Wetzel	5	9	8	16	14
	Little Indian Cr	0	4	2	3	2
	McClintic	7	19	3	13	12
	Meadow River	5	1	2	0	2
	Mill Creek	0	0	1	0	0
	Moncove	1	0	0	1	0
	Morris Creek	1	2	2	9	3
	Mount Wood Park	10	0	0	0	0
	Nathaniel Mnt	4	1	2	1	0
	New River Gorge	18	0	0	0	0
	Panther Sf	21	6	10	19	24
	Pedlar	3	4	2	3	3
	Pleasants Creek	1	10	9	17	8
	Plum Orchard	3	2	4	5	3
	Pruntytown	3	2	4	1	2
	R D Bailey	87	18	20	36	34
	Ritchie Mines	0	1	1	0	1
	Sand Hill	0	0	0	2	3
	Seneca Sf	7	5	2	6	10
	Shannondale	18	22	14	12	16
	Short Mnt	2	4	9	1	0
	Sleepy Creek	26	13	19	23	24
	Smoke Camp	0	0	0	0	1
	Snake Hill	4	5	0	5	5
	South Branch	2	0	1	2	1
	Stonecoal	2	3	5	4	8
	Stonewall Jck	53	28	33	39	53
	Stumptown	1	1	0	1	1
	Summersville	11	9	9	7	4
	The Crossings	21	0	0	0	0
	The Jug	0	4	0	4	0
	Tug Fork	0	1	0	0	0
	Underwood	0	1	1	3	1
	Upper Mud River	3	7	1	1	2
	Wallback	6	5	6	2	3
Whitings Neck	11	0	0	0	0	
Widmyer	1	0	0	2	0	
Woodrum	0	0	0	1	0	
State Land Total		664	436	425	492	518
Private Land		27,171	20,997	26,444	24,691	28,845
Unknown		23	6	53	228	260
State Total		28,482	21,962	27,404	25,778	29,979

Table 5. West Virginia antlerless harvest, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	1,580	1,184	1,025	897	1,222
Brooke	590	501	385	596	604
Hancock	545	373	389	484	465
Harrison	1,939	1,208	1,323	1,491	1,580
Marion	1,488	895	965	1,132	1,391
Marshall	1,257	926	1,075	1,307	1,104
Monongalia	1,589	1,235	1,273	1,326	1,255
Ohio	477	348	351	495	470
Preston	2,421	1,920	1,974	2,341	2,317
Taylor	875	662	709	747	680
Tucker	582	266	440	459	428
Wetzel	1,417	942	974	1,172	1,646
Dist. I Subtotal	14,760	10,460	10,883	12,447	13,162
Berkeley	728	557	674	647	941
Grant	954	559	622	661	915
Hampshire	1,575	905	1,089	1,103	1,571
Hardy	1,610	800	874	987	1,370
Jefferson	529	410	461	517	566
Mineral	1,160	861	861	993	1,194
Morgan	723	477	380	470	754
Pendleton	1,046	358	576	705	717
Dist. II Subtotal	8,325	4,927	5,537	6,083	8,028
Braxton	1,656	1,032	1,368	1,239	1,524
Clay	172	114	38	151	249
Lewis	2,583	1,350	1,511	1,575	2,073
Nicholas	267	197	348	589	539
Pocahontas	93	267	556	384	405
Randolph	724	539	1,434	1,331	1,138
Upshur	1,307	1,021	1,361	1,587	1,769
Webster	164	131	246	501	405
Dist. III Subtotal	6,966	4,651	6,862	7,357	8,102
Fayette	357	73	186	401	436
Greenbrier	1,145	574	777	818	1,108
Mercer	414	110	54	76	415
Monroe	1,745	952	823	916	1,710
Raleigh	75	57	193	131	356
Summers	1,041	329	128	1,165	1,119
Dist. IV Subtotal	4,777	2,095	2,161	3,507	5,144
Boone	34	51	61	89	251
Cabell	560	452	377	420	734
Kanawha	649	547	674	631	829
Lincoln	54	225	120	659	949
Mason	2,204	1,617	2,142	2,007	2,487
Putnam	1,020	840	838	1,113	1,430
Wayne	324	242	290	369	496
Dist. V Subtotal	4,845	3,974	4,502	5,288	7,176
Calhoun	1,004	527	644	765	1,044
Doddridge	1,233	550	741	730	946
Gilmer	1,165	664	708	639	1,230
Jackson	2,508	1,270	1,800	1,807	2,467
Pleasants	509	347	329	363	452
Ritchie	2,069	1,188	1,184	1,339	1,902
Roane	1,603	1,050	1,204	1,154	2,119
Tyler	1,440	899	1,023	920	1,237
Wirt	1,240	753	986	952	1,404
Wood	2,070	1,245	1,698	1,659	2,223
Dist. VI Subtotal	14,841	8,493	10,317	10,328	15,024
State Total	54,514	34,600	40,262	45,010	56,636

Table 6. Antlerless harvest by locality in West Virginia, 2009-2013.

Area	Locality	2009	2010	2011	2012	2013
Monongahela NF	Beaver Dam	0	0	1	0	1
	Blackwater	85	44	35	47	52
	Cheat	0	0	0	0	4
	Cranberry	0	2	0	11	15
	Little River	0	1	0	6	37
	Neola	2	0	1	1	6
	Otter Creek	24	7	10	6	10
	Potomac	153	17	18	86	100
	Rimel	0	0	0	0	2
Tea Creek	0	0	0	5	5	
Monongahela NF Total		264	71	65	162	232
George Washington NF	Shenandoah	25	2	0	14	11
	Wardensville	51	39	24	58	46
George Washington NF Total		76	41	24	72	57
	Potts Creek	16	3	1	6	0
Jefferson NF Total		16	3	1	6	0
State Land	Allegheny	7	5	0	4	6
	Amherst/Plymouth	7	13	16	13	16
	Bear Rocks	1	3	3	7	7
	Becky Creek	5	2	1	0	0
	Beech Fork	21	13	10	10	31
	Beury Mtn	0	12	26	3	3
	Big Ditch	0	0	1	1	1
	Big Ugly	2	0	1	3	6
	Bluestone	169	83	41	169	166
	Briery Mnt	3	0	0	0	0
	Burches Run	0	0	2	1	0
	Burnsville	47	51	64	76	92
	Cabwaylingo Sf	0	0	1	0	1
	Calvin Price Sf	0	0	0	1	1
	Camp Creek Sf	3	0	2	0	5
	Castleman Run	7	9	3	11	12
	Center Branch	11	10	3	3	2
	Conaway Run	3	3	2	2	11
	Coopers Rock Sf	42	65	42	52	52
	Cornstalk	76	79	102	94	123
	Cross Creek	8	16	7	18	43
	Dents Run WMA	0	0	1	3	11
	Dunkards Fork	1	0	0	1	1
	East Lynn	4	5	2	4	9
	Edwards Run	0	1	7	2	2
	Elk Fork	0	0	0	5	2
	Elk River	36	27	15	35	54
	Fort Mill Ridge	0	2	2	1	2
	Frozen Camp	40	23	17	17	36
	Green Bottom	2	1	1	2	2
	Greenbrier Sf	3	0	0	0	3
	Hilbert	0	0	0	2	0
Hillcrest	12	4	13	14	11	
Hughes River	45	30	27	53	58	
Huttonsville	7	0	2	0	1	

Table 6. Continued.

Area	Locality	2009	2010	2011	2012	2013
State Land	Kumbrabow Sf	0	2	0	0	0
	Lewis Wetzel	27	19	32	38	67
	Little Indian Cr	3	2	13	12	8
	McClintic	31	26	56	29	49
	Meadow River	9	0	5	4	4
	Mill Creek	1	0	1	0	4
	Moncove	5	1	2	4	1
	Morris Creek	2	1	2	0	0
	Mount Wood Park	7	0	0	0	0
	Nathaniel Mnt	13	1	7	9	9
	New River Gorge	11	0	0	0	0
	O'Brien	0	0	0	0	1
	Ohio River Islan	1	0	0	0	0
	Pedlar	9	6	4	1	8
	Pleasants Creek	12	13	5	13	14
	Plum Orchard	0	2	4	3	1
	Pruntytown	20	2	7	8	15
	Ritchie Mines	9	4	5	4	7
	Sand Hill	0	0	0	0	7
	Seneca Sf	0	0	0	1	5
	Shannondale	19	18	22	33	20
	Short Mnt	22	21	16	23	11
	Sleepy Creek	70	42	57	100	75
	Smoke Camp	0	0	0	2	0
	Snake Hill	9	2	8	4	10
	South Branch	3	1	1	3	3
	Stonecoal	3	7	5	14	12
	Stonewall Jck	196	90	115	119	152
	Stonewall Resort	57	0	0	0	0
	Stumptown	5	7	0	2	2
	Summersville	0	0	0	0	1
	Sutton Res	2	1	2	0	0
	Tate Lohr	1	0	0	0	0
	Teter Creek	2	0	1	0	0
	The Jug	13	16	11	18	31
	Underwood	6	11	3	4	11
Upper Mud River	1	0	2	11	1	
Wallback	0	1	0	1	1	
Widmyer	0	0	0	1	0	
Woodrum	0	2	0	2	1	
State Land Total		1,131	755	800	1,070	1,301
Private Land		53,020	33,724	39,372	43,691	55,033
Unknown		7	6	0	9	13
State Total		54,514	34,600	40,262	45,010	56,636

Table 7. Muzzleloader harvests in West Virginia, 2009-2013.

County	2009	2010	2011	2012	2013
Barbour	247	226	186	131	152
Brooke	96	88	72	49	64
Hancock	121	103	97	75	72
Harrison	268	197	240	135	168
Marion	177	128	152	85	119
Marshall	227	177	201	119	134
Monongalia	189	185	230	111	142
Ohio	62	65	63	45	40
Preston	450	314	294	243	255
Taylor	102	130	119	66	100
Tucker	105	140	163	85	101
Wetzel	247	118	185	136	165
Dist. I Subtotal	2,291	1,871	2,002	1,280	1,512
Berkeley	118	109	142	64	111
Grant	278	124	139	120	98
Hampshire	224	119	180	81	165
Hardy	213	128	172	83	131
Jefferson	82	55	73	46	61
Mineral	162	137	168	99	116
Morgan	108	81	74	46	88
Pendleton	209	50	139	81	93
Dist. II Subtotal	1,394	803	1,087	620	863
Braxton	333	271	362	238	327
Clay	39	28	17	36	52
Lewis	455	225	301	157	233
Nicholas	33	36	46	244	256
Pocahontas	18	106	120	64	130
Randolph	310	398	450	253	332
Upshur	195	176	234	154	216
Webster	20	24	26	200	199
Dist. III Subtotal	1,403	1,264	1,556	1,346	1,745
Fayette	175	18	38	200	241
Greenbrier	240	115	175	114	212
Mercer	120	28	34	27	142
Monroe	275	146	150	134	139
Raleigh	36	22	19	12	134
Summers	134	82	42	122	136
Dist. IV Subtotal	980	411	458	609	1,004
Boone	25	15	23	24	172
Cabell	126	86	80	66	100
Kanawha	154	123	173	72	119
Lincoln	44	167	57	81	167
Mason	308	245	311	173	215
Putnam	147	131	152	100	158
Wayne	84	45	60	74	69
Dist. V Subtotal	888	812	856	590	1,000
Calhoun	194	102	120	62	155
Doddridge	197	78	136	55	127
Gilmer	240	101	189	91	160
Jackson	380	200	358	178	222
Pleasants	57	53	64	30	46
Ritchie	288	181	192	101	213
Roane	212	141	223	101	213
Tyler	192	124	166	93	110
Wirt	224	154	216	94	161
Wood	292	181	250	135	208
Dist. VI Subtotal	2,276	1,315	1,914	940	1,615
State Total	9,232	6,476	7,873	5,385	7,739

Table 8. Deer mortality by type of season in West Virginia, 2013.

County	Buck Gun	Antlerless	Archery	Muzzleloader	Total
Barbour	1,109	1,222	544	152	3,027
Brooke	389	604	271	64	1,328
Hancock	273	465	432	72	1,242
Harrison	1,301	1,580	658	168	3,707
Marion	1,130	1,391	541	119	3,181
Marshall	1,051	1,104	382	134	2,671
Monongalia	1,107	1,255	785	142	3,289
Ohio	399	470	304	40	1,213
Preston	1,741	2,317	1,069	255	5,382
Taylor	635	680	266	100	1,681
Tucker	527	428	332	101	1,388
Wetzel	1,537	1,646	418	165	3,766
Dist. I Subtotal	11,199	13,162	6,002	1,512	31,875
Berkeley	871	941	639	111	2,562
Grant	1,135	915	402	98	2,550
Hampshire	1,846	1,571	393	165	3,975
Hardy	1,447	1,370	396	131	3,344
Jefferson	445	566	425	61	1,497
Mineral	1,345	1,194	398	116	3,053
Morgan	743	754	274	88	1,859
Pendleton	1,163	717	326	93	2,299
Dist. II Subtotal	8,995	8,028	3,253	863	21,139
Braxton	1,626	1,524	589	327	4,066
Clay	475	249	299	52	1,075
Lewis	1,692	2,073	517	233	4,515
Nicholas	824	539	753	256	2,372
Pocahontas	961	405	345	130	1,841
Randolph	1,329	1,138	786	332	3,585
Upshur	1,396	1,769	627	216	4,008
Webster	717	405	436	199	1,757
Dist. III Subtotal	9,020	8,102	4,352	1,745	23,219
Fayette	835	436	806	241	2,318
Greenbrier	1,509	1,108	661	212	3,490
McDowell	0	0	699	0	699
Mercer	536	415	667	142	1,760
Monroe	1,466	1,710	661	139	3,976
Raleigh	579	356	876	134	1,945
Summers	973	1,119	543	136	2,771
Wyoming	0	0	1,062	0	1,062
Dist. IV Subtotal	5,898	5,144	5,975	1,004	18,021
Boone	725	251	485	172	1,633
Cabell	763	734	436	100	2,033
Kanawha	1,380	829	1,041	119	3,369
Lincoln	1,124	949	535	167	2,775
Logan	0	0	841	0	841
Mason	1,495	2,487	789	215	4,986
Mingo	0	0	490	0	490
Putnam	1,210	1,430	663	158	3,461
Wayne	870	496	406	69	1,841
Dist. V Subtotal	7,567	7,176	5,686	1,000	21,429
Calhoun	1,164	1,044	353	155	2,716
Doddridge	1,243	946	284	127	2,600
Gilmer	1,427	1,230	403	160	3,220
Jackson	1,917	2,467	783	222	5,389
Pleasants	438	452	114	46	1,050
Ritchie	2,091	1,902	489	213	4,695
Roane	1,893	2,119	643	213	4,868
Tyler	1,000	1,237	326	110	2,673
Wirt	1,091	1,404	405	161	3,061
Wood	1,580	2,223	911	208	4,922
Dist. VI Subtotal	13,844	15,024	4,711	1,615	35,194
State Total	56,523	56,636	29,979	7,739	150,877

Table 9. West Virginia 2013 deer kill per square mile of habitat by season (calculated using deer habitat open by county for season, all seasons combined kill based on total deer habitat for county).

County	Area	Bucks	Antlerless	Muzzleloader	Archery	All Seasons Combined
Barbour	328	3.38	3.72	0.46	1.66	9.22
Brooke	72	5.39	8.37	0.89	3.76	18.40
Hancock	64	4.30	7.32	1.13	6.80	19.54
Harrison	379	3.43	4.17	0.44	1.74	9.78
Marion	286	3.95	4.87	0.42	1.89	11.13
Marshall	294	3.58	3.76	0.46	1.30	9.10
Monongalia	310	3.57	4.05	0.46	2.53	10.61
Ohio	82	4.85	5.71	0.49	3.69	14.74
Preston	632	2.75	3.67	0.40	1.69	8.52
Taylor	160	3.97	4.25	0.63	1.66	10.51
Tucker	402	1.31	1.06	0.25	0.83	3.45
Wetzel	350	4.39	4.70	0.47	1.19	10.76
Dist. I Subtotal	3,359	3.33	3.92	0.45	1.79	9.49
Berkeley	297	2.93	3.17	0.37	2.15	8.63
Grant	471	2.41	1.94	0.21	0.85	5.41
Hampshire	631	2.92	2.49	0.26	0.62	6.30
Hardy	569	2.54	2.41	0.23	0.70	5.88
Jefferson	198	2.25	2.86	0.31	2.14	7.55
Mineral	319	4.22	3.74	0.36	1.25	9.58
Morgan	213	3.49	3.54	0.41	1.29	8.73
Pendleton	690	1.69	1.04	0.13	0.47	3.33
Dist. II Subtotal	3,388	2.66	2.37	0.25	0.96	6.24
Braxton	501	3.25	3.04	0.65	1.18	8.12
Clay	338	1.41	2.28	0.15	0.89	3.18
Lewis	373	4.53	5.55	0.62	1.38	12.09
Nicholas	632	1.30	1.40	0.40	1.19	3.75
Pocahontas	911	1.06	0.44	0.14	0.38	2.02
Randolph	1,019	1.30	1.12	0.33	0.77	3.52
Upshur	343	4.07	5.16	0.63	1.83	11.69
Webster	535	1.34	0.76	0.37	0.82	3.29
Dist. III Subtotal	4,652	1.94	1.94	0.38	0.94	4.99
Fayette	629	1.33	1.09	0.38	1.28	3.69
Greenbrier	991	1.52	1.12	0.21	0.67	3.52
McDowell	515	0.00		0.00	1.36	1.36
Mercer	380	1.41	1.09	0.37	1.75	4.63
Monroe	463	3.17	3.69	0.30	1.43	8.59
Raleigh	562	1.03	1.00	0.24	1.56	3.46
Summers	341	2.85	3.28	0.40	1.59	8.12
Wyoming	481	0.00		0.00	2.21	2.21
Dist. IV Subtotal	4,361	1.35	1.76	0.23	1.37	4.13
Boone	485	1.50	0.52	0.35	1.00	3.37
Cabell	240	3.18	3.06	0.42	1.82	8.48
Kanawha	798	1.73	2.90	0.15	1.31	4.22
Lincoln	426	2.64	2.23	0.39	1.26	6.51
Logan	422	0.00		0.00	1.99	1.99
Mason	413	3.62	6.02	0.52	1.91	12.06
Mingo	404	0.00		0.00	1.21	1.21
Putnam	320	3.78	4.46	0.49	2.07	10.80
Wayne	485	1.79	1.89	0.14	0.84	3.80
Dist. V Subtotal	3,993	1.90	2.95	0.25	1.42	5.37
Calhoun	276	4.22	3.79	0.56	1.28	9.85
Doddridge	316	3.94	3.00	0.40	0.90	8.24
Gilmer	330	4.32	3.72	0.48	1.22	9.74
Jackson	447	4.29	5.52	0.50	1.75	12.05
Pleasants	125	3.49	3.60	0.37	0.91	8.37
Ritchie	443	4.72	4.29	0.48	1.10	10.59
Roane	476	3.98	4.45	0.45	1.35	10.23
Tyler	252	3.97	4.91	0.44	1.29	10.61
Wirt	230	4.75	6.11	0.70	1.76	13.32
Wood	325	4.86	6.84	0.64	2.80	15.15
Dist. VI Subtotal	3,220	4.30	4.67	0.50	1.46	10.93
State Total	22,972	2.46	2.90	0.34	1.31	6.57

*Note counties or portions thereof not open to Class N antlerless deer season include special youth, Class Q/QQ and Class XS season harvest however antlerless kill per square mile is calculated only on area open to Class N season if a portion of the county is closed to Class N season.



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