

## **Results from Online Game Harvest Survey 2008-2009**

**Roger D. Applegate  
Wildlife Management Division**

### **Introduction**

Hunter harvest surveys are used to provide indicators of constituent use of wildlife resources, as a demographic measure of mortality factors in populations, and often incorrectly used as an index to population trend (Nichols et al. 2001). Typically hunters and harvest is measured with mail questionnaires or telephone surveys (Eberhardt and Murray 1960, Legler et al. 1961). These methods have worked reasonably well, but suffer from low response rates, high cost, and problems with obtaining an adequate and statistically valid sample (Dillman 2000).

Sampling is especially critical because samples are not often drawn randomly. For example, until states began using automated licensing systems, the sampling frame consisted of paper licenses that were stored in file boxes and drawers and required extensive manual handling in order to draw samples and prepare mailing lists or telephone call lists (He and Kuloweic 1999). Sample selection was not random because of the cumbersome nature of the sampling frame; therefore, selection rules that were not necessarily systematic, had to be applied. Since automation, sampling issues are more easily handled, but there are still issues of high cost of postage, printing, labor, and telephone service, as well as lowered response rates.

Because the telephone has been used increasingly as a marketing and sales tool, telephone surveys have suffered most from decreased response rates (Kaplowitz et al. 2004, Curtin et al. 2005). Lukacs (2007) has shown that internet and telephone surveys do not result in the same estimates. Increasing sample sizes to compensate for lowered response rates only serves to increase the cost when the sample frame is large (Salant and Dillman 1994).

Hunting statistics are also affected by recall, rounding, and digit preference biases (Beaman et al. 1997, Beaman et al. 2005a, Tarrant and Manfredo 1993). These biases are partially overcome by providing respondents with diaries to record their hunting activities (Beaman et al. 2005b).

At present, two surveys are used to obtain data on harvest of small game species. The Avid Hunter survey uses volunteer bobwhite, rabbit, and grouse/woodcock hunters, and a mixed-mode survey is being piloted for use in estimating harvest of all small game species.

### **Avid Hunter Survey**

The Avid Hunter survey collects data from volunteer bobwhite, rabbit, and grouse/woodcock hunters. A cooperator mailing list is maintained by the University of Tennessee, Department of Forestry, Wildlife and Fisheries. Diary cards are mailed to cooperators in September each year. The cards are prepaid so that hunters need only to maintain a log of their hunts and place the cards in the mail at the end of the hunting seasons each year. These are received by the TWRA Nashville office, edited, and sent to UT where the data are entered into a database and summaries generated.

The Avid Hunter survey generates statistics from a discrete and unique group of hunters that are willing to annually maintain hunting diaries and is biased by not representing an expected larger group of hunters that for one reason or another are not participating in the survey. The lack of participation is addressed by advertising or promoting the survey but it is believed that the most likely participants are the most motivated hunters, the term avid is applied. Since the survey lacks randomness of participant selection valid statistical inference and the ability to calculate estimates of harvest and participation are lacking. Although this has been attempted in the past, it lacks statistical validity such that any estimates derived from this survey should no longer be used.

The Avid Hunter survey remains unchanged from previous small game reports (see Applegate and Stephens 2007 for an example). The comprehensive results of this survey are provided as a series of tables in the Appendix at the end of this report and are provided for archival purposes.

### **Mixed-Mode Survey**

This survey is considered mixed-mode because its design includes both mail and internet elements. Standard mail is used to deliver diaries and reminder cards to selected participants who are then instructed to a website to complete a survey after the close of hunting seasons. Over time this survey could become completely electronically based given a large enough sample frame of participants with email addresses.

### **Sampling Frame and Procedure**

A random sample of 7,158 of Type 01, 02, 04, 070, 071, 072, 073, 074, 166, 167, 189, and 198 license (Hunting and Fishing Combination, Junior Hunt/Fish/Trap, Annual Sportsman, nonresident Junior Hunt/Fish, Annual Nonresident Hunt-Small Game, Nonresident 7-day Small Game, Nonresident Annual All Game, Nonresident 7-day all game, Permanent Senior Citizen, Annual Senior Citizen, Permanent Wheelchair, Permanent DAV, respectively) as well as Lifetime license purchasers was selected from the license database in August 2008. A Hunter Cooperator Diary and introductory letter was mailed to each of the selected licensees in early August. In mid-February 2009 a letter was sent to each selected participant providing them with an internet link, login and password for completing a survey online. One additional reminder mailing was made to induce participation. The option to receive a paper survey by mail was offered in the follow-up mailing to allow participation of those licensees not able to access the internet.

### **Analysis**

Harvest, participation and success statistics are calculated as:

Estimated harvest (Landwehr 1982, Equation 1):

(1)

$$H = h \left( \frac{N}{n} \right)$$

where H = harvest estimate  
h = harvest reported by survey respondents  
N = number of active hunters  
n = number of survey respondents

A margin of error for the estimate is calculated from (Agresti and Franklin 2007):  
(2)

$$\frac{Z}{\sqrt{n}}$$

Where Z = the sample proportion  
n = number of survey respondents

The number of active versus inactive hunters per class of game is determined by:

(3)

$$N = Pxa$$

where N = number of active hunters  
P = number of licenses that were sold  
a = percent of hunters in the survey that actually hunted for a particular species

## Results

There were 577 undeliverable diaries, letters, and reminders leaving a total usable sample of 6,581 licensees. The survey received 696 responses by internet and 16 responses via paper surveys resulting in a total response rate of 11% (11% internet, <1% paper).

There were sufficient samples to estimate harvest of mourning dove, crow, rabbits, squirrels, bullfrog, and raccoon. There were insufficient samples for collared dove, bobwhite, ruffed grouse, woodcock, snipe, and opossum. Estimated harvest and estimated total hunters by species are shown in Table 1. Table 2 provides mean bag and mean days hunted for all species except raccoon and opossum. Mean days hunted and animals treed and bagged for raccoon and opossum are shown in Table 3.

Our estimates indicate that the top 4 hunting activities were squirrel, dove, rabbit, and crow hunting (Table 4). It is important to note that are unable to discern whether crows were hunted intentionally as game or incidentally to hunting other game or for damage purposes. The treeing of raccoons by raccoon dog hunters/trainers is quite high and the number of raccoon hunters equals the number of quail hunters. Bullfrog hunting was far more important than imagined based on this survey.

The highest harvest rate (harvest/day) was for doves followed by bullfrogs as second and crows as third (Table 5). Dove harvest rate was higher on WMA than on lease fields.

Caution is urged in assigning too much importance to a single year survey. The value in this survey will be in repeating it on an annual basis to establish a statistically valid trend. Results of this survey are presented as a matter of record and to establish how this survey can be conducted and used for future trend analysis.

## Recommendations

We believe this survey was successful in providing an indication of the potential of this procedure to obtain data from our constituents. We recommend duplicating this survey for the 2009-10 hunting season and calculating an appropriate sample size for each strata (license type) as per Lenth (2001) using his program PIFACE (Lenth 2006-09). Since the Tennessee licensing system is formed around licenses that combine hunting and fishing rather than hunting specific licenses, we are challenged to obtain sufficient samples of those who hunt versus those who only fish. In addition, questions need to be continually refined in order to assure that we are asking for the correct information in the correct way. Crow hunters, for example, need to be asked whether they hunted crows as a game species or whether they hunted incidentally to other species or for damage.

A separate spring survey should be developed for spring squirrel hunting as this activity is difficult to estimate from a fall based survey. Also, we should consider conducting the survey for bullfrog hunters earlier in the year in order to minimize memory bias resulting from providing diaries in late summer. Each of these refinements will require time to develop, pilot, and implement.

Table 1. Estimates of harvest and number of active hunters for small game species for the 2008-09 season.

Species	Active Hunters	Estimated Harvest	MOE 80%
Doves	40,318	636,555	10.08
Quail	7,115	24,394	32.13
Grouse	2,372		
Crow	26,088	320,510	18.55
Rabbits	47,433	369,208	13.97
Squirrels	101,981	817,092	9.39
Bullfrogs	18,973	279,536	21.95
Raccoon	18,025	78,538	22.72
Opossum	3,795	6,375	49.07
Snipe	1,186		

Table 2. Mean days hunted and bag for small game species for the 2008-09 season.

Species	N	Mean Bag	Standard Deviation	Mean Days	Standard Deviation
Doves	71	15.86	19.0	3.2	2.4
Quail	7	3.4	8.2	3.9	8.2
Crows	21	12.3	29.3	5.9	8.0
Rabbits	37	7.8	15.2	8.0	10.9
Squirrels	82	8.0	9.9	5.3	5.7
Gray		6.6	8.7		
Fox		1.3	4.6		
Red		.8	.5		
Bullfrog	15	14.7	24.2	4.3	4.8

Table 3. Mean days hunted, and raccoons and opossums treed and harvested during 2007-08 season.

Species	N	Days	SD	Treed	SD	Harvested	SD
Raccoon	14	15.9	38.9	6.2	12.7	4.4	10.3
Opossum	3	1.7	.6	1.0		1.7	.6

Table 4. Rankings of hunting activity based on species hunted and number of participants during the 2007-08 season.

Rank	Species	Harvest	Rank	Species	Number Hunters
1	Squirrels	817,092	1	Squirrel	101,981
2	Dove	636,555	2	Rabbits	47,433
3	Rabbits	369,208	3	Doves	30,318
4	Crow	320,510	4	Crow	26,088
5	Bullfrog	279,536	5	Bullfrog	18,973
6	Raccoon	78,538	5	Raccoon	18,025
7	Quail	24,394	6	Quail	7,115

Table 5. Harvest rates of game species during the 2007-08 season.

Species	Harvest/Day	
Dove	5.0	
Dove WMA		4.2
Dove Lease Field		2.7
Quail	.89	
Crow	2.1	
Rabbits	1.0	
Squirrels	1.5	
Bullfrog	3.5	
Raccoon		
Treed	.39	
Harvested	.27	

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**AVID HUNTER SURVEY APPENDIX TABLES**

DISTRIBUTION OF QUAIL HUNTS AND HARVEST THROUGH THE 2008-2009 SEASON

HUNTING EFFORT				QUAIL HARVEST		
Week Beginning	No. of Trips	Percent of Total Trips	Cumulative No. of Trips	Cumulative Percent	Percent of Total Harvest	Cumulative Percent
08NOV08	43	9.35	43	9.35	11.33	11.33
15NOV08	33	7.17	76	16.52	7.85	19.18
22NOV08	17	3.70	93	20.22	3.93	23.11
29NOV08	27	5.87	120	26.09	5.44	28.55
06DEC08	21	4.57	141	30.65	6.19	34.74
13DEC08	25	5.43	166	36.09	5.44	40.18
20DEC08	24	5.22	190	41.30	4.53	44.71
27DEC08	29	6.30	219	47.61	6.19	50.91
03JAN09	34	7.39	253	55.00	7.55	58.46
10JAN09	28	6.09	281	61.09	4.38	62.84
17JAN09	35	7.61	316	68.70	6.04	68.88
24JAN09	26	5.65	342	74.35	6.95	75.83
31JAN09	24	5.22	366	79.57	6.65	82.48
07FEB09	24	5.22	390	84.78	3.93	86.40
14FEB09	32	6.96	422	91.74	6.19	92.60
21FEB09	32	6.96	454	98.70	6.65	99.24
28FEB09	6	1.30	460	100.00	0.76	100.00

QUAIL HARVEST DATA BY PUBLIC AREA (2008-2009)

Wildlife Management Area or Public Hunting Area	No. of Trips	No. of Hunters	No. Coveys Flushed	Avg. No. Quail Per Covey	Quail Bagged	Total Party Hours Hunted	Covey Flushes Per Party Hour	Harvest Per Party Hour	Covey Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
AEDC WMA	2	3	1	12.0	1	6.00	0.17	0.17	0.50	0.50	0.33
Catoosa WMA	4	6	0	0.0	0	17.00	0.00	0.00	0.00	0.00	0.00
Fall Creek Falls WMA	6	14	6	13.0	14	13.00	0.46	1.08	1.00	2.33	1.00
Fort Campbell	6	13	5	9.2	8	22.50	0.22	0.36	0.83	1.33	0.62
Gooch WMA	1	1	0	0.0	0	2.00	0.00	0.00	0.00	0.00	0.00
Kyker Bottoms Refuge	2	6	10	8.0	11	7.00	1.43	1.57	5.00	5.50	1.83
LBL	1	3	0	0.0	0	5.00	0.00	0.00	0.00	0.00	0.00
Laurel Hill WMA	1	1	0	0.0	0	5.00	0.00	0.00	0.00	0.00	0.00
Old Hickory WMA	7	8	8	9.1	18	30.50	0.26	0.59	1.14	2.57	2.25
Percy Priest WMA	10	11	4	7.8	8	36.00	0.11	0.22	0.40	0.80	0.73
Shelton Ferry WMA	3	5	1	15.0	0	8.00	0.13	0.00	0.33	0.00	0.00
Wolf River WMA	4	4	4	14.3	7	9.50	0.42	0.74	1.00	1.75	1.75
Yanahli WMA	6	6	0	0.0	0	17.50	0.00	0.00	0.00	0.00	0.00
	53	81	39	10.1	67	179.00	0.22	0.37	0.74	1.26	0.83

QUAIL HARVEST DATA BY SMALL GAME REGION (2008-2009)

Small Game Region	No. of Trips	No. of Hunters	No. Coveys Flushed	Avg. No. Quail Per Covey	Quail Bagged	Total Party Hours Hunted	Covey Flushes Per Party Hour	Harvest Per Party Hour	Covey Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
WEST	159	331	174	9.8	318	464.75	0.37	0.68	1.09	2.00	0.96
MIDDLE	231	360	184	10.8	292	723.00	0.25	0.40	0.80	1.26	0.81
PLATEAU	35	67	19	11.7	18	86.00	0.22	0.21	0.54	0.51	0.27
EAST	35	73	30	9.2	34	115.00	0.26	0.30	0.86	0.97	0.47
	460	831	407	10.3	662	1388.75	0.29	0.48	0.88	1.44	0.80

QUAIL HARVEST DATA BY SMALL GAME REGION (CONTINUED)

Small Game Region	Avg. Hours Per Trip	% of Trips where Avg. Harvest Per Hunter > 5	Crippling Loss (%)
WEST	2.9	0.00	11.95
MIDDLE	3.1	0.87	11.64
PLATEAU	2.5	0.00	22.22
EAST	3.3	0.00	17.65
	3.0		

**QUAIL HARVEST DATA BY ZONE (2008-2009)**

Regional Unit	No. of Trips	No. of Hunters	No. of Coveys Flushed	Avg. No. Quail Per Covey	Quail Bagged	Total Party Hours Hunted	Covey Flushes Per Party Hour	Harvest Per Party Hour	Covey Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
NORTH-WEST	85	188	96	10.7	179	287.50	0.33	0.62	1.13	2.11	0.95
NORTH-MIDDLE	118	201	107	10.3	183	387.25	0.28	0.47	0.91	1.55	0.91
NORTH-PLATEAU	9	16	4	9.8	2	40.00	0.10	0.05	0.44	0.22	0.13
NORTH-EAST	8	16	2	8.0	4	30.50	0.07	0.13	0.25	0.50	0.25
SOUTH-WEST	74	143	78	8.8	139	177.25	0.44	0.78	1.05	1.88	0.97
SOUTH-MIDDLE	113	159	77	11.5	109	335.75	0.23	0.32	0.68	0.96	0.69
SOUTH-PLATEAU	26	51	15	12.2	16	46.00	0.33	0.35	0.58	0.62	0.31
SOUTH-EAST	27	57	28	9.3	30	84.50	0.33	0.36	1.04	1.11	0.53
	460	831	407	10.3	662	1388.75	0.29	0.48	0.88	1.44	0.80

**QUAIL HARVEST DATA BY ZONE (CONTINUED)**

Regional Unit	Avg. Hours Per Trip	% of Trips where Avg. Harvest Per Hunter > 5	Crippling Loss (%)
NORTH-WEST	3.4	0.00	13.97
NORTH-MIDDLE	3.3	1.69	12.02
NORTH-PLATEAU	4.4	0.00	0.00
NORTH-EAST	3.8	0.00	100.00
SOUTH-WEST	2.4	0.00	9.35
SOUTH-MIDDLE	3.0	0.00	11.01
SOUTH-PLATEAU	1.8	0.00	25.00
SOUTH-EAST	3.1	0.00	6.67
	3.0		

**QUAIL HARVEST DATA BY MONTH (2008-2008)**

MONTH	No. of Trips	No. of Hunters	No. Coveys Flushed	Avg. No. Quail Per Covey	Quail Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
NOVEMBER	104	178	92	11.3	167	316.50	0.29	0.53	0.88	1.61	0.94
DECEMBER	102	186	88	11.4	150	306.75	0.29	0.49	0.86	1.47	0.81
JANUARY	142	263	116	10.3	206	404.00	0.29	0.51	0.82	1.45	0.78
FEBRUARY	112	204	111	8.5	139	361.50	0.31	0.38	0.99	1.24	0.68
	460	831	407	10.3	662	1388.75	0.29	0.48	0.88	1.44	0.80

**QUAIL HARVEST DATA, COMPARISON OF PRIVATE LAND VS. PUBLIC LANDS**

Private or Public	No. of Trips	No. of Hunters	No. Coveys Flushed	Avg. No. Quail Per Covey	Quail Bagged	Total Party Hours Hunted	Covey Flushes Per Party Hour	Harvest Per Party Hour	Covey Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
PRIVATE	407	750	368	10.3	595	1209.75	0.30	0.49	0.90	1.46	0.79
PUBLIC	53	81	39	10.1	67	179.00	0.22	0.37	0.74	1.26	0.83
	460	831	407	10.3	662	1388.75	0.29	0.48	0.88	1.44	0.80

QUAIL HUNTER SURVEY

1992 - 2008

YEAR	No. of Trips	No. of Hunters	No. Coveys Flushed	Quail Bagged	Total Party Hours Hunted	Covey Flushes Per Party Hour	Harvest Per Party Hour	Covey Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
1992-93	886	1713	2103	4007	3857.50	0.55	1.04	2.37	4.52	2.34
1993-94	1226	2429	2667	5072	4488.70	0.59	1.13	2.18	4.14	2.09
1994-95	2198	4297	4025	7959	7913.00	0.51	1.01	1.83	3.62	1.85
1995-96	2096	4048	4138	7504	7545.00	0.55	0.99	1.97	3.58	1.85
1996-97	2383	4533	4151	8071	8406.00	0.49	0.96	1.74	3.39	1.78
1997-98	2381	4515	3569	6089	8414.50	0.42	0.72	1.50	2.56	1.35
1998-99	1928	3532	2771	4602	6204.75	0.45	0.74	1.44	2.39	1.30
1999-00	2200	3935	2945	4743	7034.75	0.42	0.67	1.34	2.16	1.21
2000-01	1647	3088	2281	3893	5316.00	0.43	0.73	1.38	2.36	1.26
2001-02	1597	3037	2184	3708	5309.75	0.41	0.70	1.38	2.33	1.22
2002-03	1587	2990	2495	3919	4999.50	0.50	0.78	1.57	2.47	1.31
2003-04	1443	2776	1987	2915	4676.50	0.42	0.62	1.38	2.02	1.05
2004-05	1239	2281	1760	2736	3968.50	0.44	0.69	1.42	2.21	1.20
2005-06	1031	1829	855	1249	3196.25	0.27	0.39	0.83	1.21	0.68
2006-07	768	1331	831	1383	2366.25	0.35	0.58	1.08	1.80	1.04
2007-08	700	1269	702	1006	2250.00	0.31	0.45	1.00	1.44	0.79
2008-09	460	831	407	662	1388.75	0.29	0.48	0.88	1.44	0.80
Total/Avg.	26017	48964	40842	71110	88213.45	0.46	0.81	1.57	2.73	1.45

**DISTRIBUTION OF RABBIT HUNTS AND HARVEST THROUGH THE 2008-2009 SEASON**

**HUNTING EFFORT**

**HARVEST**

Week Beginning	No. of Trips	Percent of Total Trips	Cumulative No. of Trips	Cumulative Percent	Percent of Total Harvest	Cumulative Percent
08NOV08	41	6.13	41	6.13	6.12	6.12
15NOV08	27	4.04	68	10.16	1.90	8.02
22NOV08	45	6.73	113	16.89	7.65	15.67
29NOV08	37	5.53	150	22.42	5.39	21.05
06DEC08	30	4.48	180	26.91	2.39	23.44
13DEC08	43	6.43	223	33.33	3.92	27.36
20DEC08	39	5.83	262	39.16	5.57	32.93
27DEC08	45	6.73	307	45.89	6.24	39.17
03JAN09	33	4.93	340	50.82	4.22	43.39
10JAN09	35	5.23	375	56.05	3.43	46.82
17JAN09	45	6.73	420	62.78	6.43	53.24
24JAN09	47	7.03	467	69.81	6.61	59.85
31JAN09	41	6.13	508	75.93	5.63	65.48
07FEB09	46	6.88	554	82.81	9.24	74.72
14FEB09	46	7.88	600	89.69	9.67	84.39
21FEB09	52	7.77	652	97.46	10.77	95.17
28FEB09	17	2.54	669	100.00	4.83	100.00

RABBIT HARVEST DATA BY PUBLIC AREA (2008-2009)

Wildlife Management Area or Public Hunting Area	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
Anderson-Tully WMA	2	8	6	6	8.00	0.75	3.00	0.75	3.00	0.75
Bark Camp Barrens	6	16	51	9	29.00	1.76	8.50	0.31	1.50	0.56
Big South Fork NRRRA	2	5	6	3	4.50	1.33	3.00	0.67	1.50	0.60
Bridgestone/Firestone WMA	2	8	10	5	8.00	1.25	5.00	0.73	2.50	0.63
Buffalo Springs WMA	1	1	2	0	5.50	0.36	2.00	0.00	0.00	0.00
Camden WMA	1	3	1	0	6.25	0.16	1.00	0.00	0.00	0.00
Catoosa WMA	8	9	27	2	48.50	0.56	3.38	0.04	0.25	0.22
Cherokee WMA - North	4	13	21	11	24.00	0.88	5.25	0.46	2.75	0.85
Chickamauga WMA	1	2	4	1	5.00	0.80	4.00	0.20	1.00	0.50
Chuck Swan WMA	1	2	0	0	3.50	0.00	0.00	0.00	0.00	0.00
Cordell Hull WMA	1	2	3	1	7.00	0.43	3.00	0.14	1.00	0.50
Fort Campbell	9	29	8	3	33.00	0.24	0.89	0.09	0.33	0.10
Haynes Bottom WMA	1	2	5	3	5.50	0.91	5.00	0.55	3.00	1.50
Henderson Island Refuge	6	6	17	5	38.50	0.44	2.83	0.13	0.83	0.83
Kyker Bottoms Refuge	2	7	26	17	8.00	3.25	13.00	2.13	8.50	2.43
LBL	9	14	13	0	30.25	0.43	1.44	0.00	0.00	0.00
Laurel Hill WMA	2	6	13	5	9.00	1.44	6.50	0.56	2.50	0.83
Lick Creek Bottoms	14	14	53	8	98.00	0.54	3.79	0.08	0.57	0.57
Lower Hatchie NWR	1	4	5	4	5.00	1.00	5.00	0.80	4.00	1.00
Maple Springs WMA	1	2	2	0	4.00	0.50	2.00	0.00	0.00	0.00
Mingo Swamp Wetland	2	5	7	1	6.00	1.17	3.50	0.17	0.50	0.20
Misc. Public Lands-Mid	10	28	100	58	56.75	1.76	10.00	1.02	5.80	2.07
Old Hickory WMA	5	11	33	7	28.50	1.16	6.60	0.25	1.40	0.64
Percy Priest WMA	5	12	23	7	24.00	0.96	4.60	0.29	1.40	0.58
Reelfoot WMA	2	8	10	6	11.00	0.91	5.00	0.55	3.00	0.75
TVA Reservoir Lands	1	2	7	2	7.00	1.00	7.00	0.29	2.00	1.00
West Sandy WMA	3	3	5	0	6.50	0.77	1.67	0.00	0.00	0.00
White Oak WMA	17	42	44	15	77.00	0.57	2.59	0.19	0.88	0.36
Williamsport WMA	3	6	4	0	6.00	0.67	1.33	0.00	0.00	0.00
Yanahli WMA	2	6	4	0	6.00	0.67	2.00	0.00	0.00	0.00
	124	276	510	179	609.25	0.84	4.11	0.29	1.44	0.65

**RABBIT HARVEST DATA BY SMALL GAME REGION (2008-2009)**

Small Game Region	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Percent Swamp Rabbits	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
WEST	234	758	1022	510	44.71	886.00	1.15	4.37	0.58	2.18	0.67
MIDDLE	271	753	1554	717	3.07	1169.25	1.33	5.73	0.61	2.65	0.95
PLATEAU	47	123	241	92	0.00	187.50	1.29	5.13	0.49	1.96	0.75
EAST	117	290	671	315	0.00	501.50	1.34	5.74	0.63	2.69	1.09
	669	1924	3488	1634		2744.25	1.27	5.21	0.60	2.44	0.85

Small Game Region	Avg. Hours Per Trip	Rabbits Jumped Per Hunter Trip	% of Trips Where Harvest Per Hunter > 3	Wounding Loss (%)
WEST	3.79	1.35	0.00	3.53
MIDDLE	4.31	2.06	3.32	4.74
PLATEAU	3.99	1.96	0.00	3.26
EAST	4.29	2.31	0.85	5.40
	4.10	1.81		

**RABBIT HARVEST DATA BY ZONE (2008-2009)**

Zone	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Percent Swamp Rabbits	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
NORTH-WEST	128	339	500	249	37.75	442.50	1.13	3.91	0.56	1.95	0.73
NORTH-MIDDLE	110	337	640	318	2.52	496.75	1.29	5.82	0.64	2.89	0.94
NORTH-PLATEAU	42	111	218	83	0.00	175.50	1.24	5.19	0.47	1.98	0.75
NORTH-EAST	59	118	232	81	0.00	279.50	0.83	3.93	0.29	1.37	0.69
SOUTH-WEST	106	419	522	261	51.34	443.50	1.18	4.92	0.59	2.46	0.62
SOUTH-MIDDLE	161	416	914	399	3.51	672.50	1.36	5.68	0.59	2.48	0.96
SOUTH-PLATEAU	5	12	23	9	0.00	12.00	1.92	4.60	0.75	1.80	0.75
SOUTH-EAST	58	172	439	234	0.00	222.00	1.98	7.57	1.05	4.03	1.36
	669	1924	3488	1634		2744.25	1.27	5.21	0.60	2.44	0.85

Zone	Avg. Hours Per Trip	Rabbits Jumped Per Hunter Trip	% of Trips Where Harvest Per Hunter > 3	Wounding Loss (%)
NORTH-WEST	3.46	1.47	0.00	4.42
NORTH-MIDDLE	4.52	1.90	3.64	5.35
NORTH-PLATEAU	4.18	1.96	0.00	3.61
NORTH-EAST	4.74	1.97	0.00	3.70
SOUTH-WEST	4.18	1.25	0.00	2.68
SOUTH-MIDDLE	4.18	2.20	3.11	4.26
SOUTH-PLATEAU	2.40	1.92	0.00	0.00
SOUTH-EAST	3.83	2.55	1.72	5.98
	4.10	1.81		

**RABBIT HARVEST DATA BY MONTH (2008-2009)**

MONTH	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
NOVEMBER	127	341	642	304	487.50	1.32	5.06	0.62	2.39	0.89
DECEMBER	168	438	703	311	659.75	1.07	4.18	0.47	1.85	0.71
JANUARY	190	563	900	404	799.50	1.13	4.74	0.51	2.13	0.72
FEBRUARY	184	582	1243	615	797.50	1.56	6.76	0.77	3.34	1.06
	669	1924	3488	1634	2744.25	1.27	5.21	0.60	2.44	0.85

**RABBIT HARVEST DATA, COMPARISON OF PRIVATE LAND VS. PUBLIC LANDS**

PUBLIC OR PRIVATE	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
PRIVATE	545	1648	2978	1455	2135.00	1.39	5.46	0.68	2.67	0.88
PUBLIC	124	276	510	179	609.25	0.84	4.11	0.29	1.44	0.65
	669	1924	3488	1634	2744.25	1.27	5.21	0.60	2.44	0.85

**RABBIT HUNTER SURVEY**

**1993 - 2008**

YEAR	No. of Trips	No. of Hunters	No. of Rabbits Jumped	Rabbits Bagged	Total Party Hours Hunted	Rabbits Jumped Per Party Hour	Rabbits Jumped Per Party Trip	Harvest Per Party Hour	Harvest Per Party Trip	Harvest Per Hunter Day
1993-94	235	764	1653	701	904.70	1.83	7.03	0.77	2.98	0.92
1994-95	986	2608	6257	3464	3874.25	1.62	6.35	0.89	3.51	1.33
1995-96	752	2067	4664	2502	2947.25	1.58	6.20	0.85	3.33	1.21
1996-97	635	1727	3954	2141	2648.50	1.49	6.23	0.81	3.37	1.24
1997-98	630	1741	3923	2165	2643.25	1.48	6.23	0.82	3.44	1.24
1998-99	602	1672	3961	2110	2469.25	1.60	6.58	0.85	3.50	1.26
1999-00	631	1579	3458	1613	2599.75	1.33	5.48	0.62	2.56	1.02
2000-01	734	1856	4472	2343	2873.75	1.56	6.09	0.82	3.19	1.26
2001-02	695	1857	4353	2052	2612.00	1.67	6.26	0.79	2.95	1.11
2002-03	808	2044	4804	2358	2996.00	1.60	5.95	0.79	2.92	1.15
2003-04	833	2084	3994	1861	3159.75	1.26	4.79	0.59	2.23	0.89
2004-05	777	2126	4221	2214	3053.25	1.38	5.43	0.73	2.85	1.04
2005-06	943	2492	4514	2280	3608.50	1.25	4.79	0.63	2.42	0.91
2006-07	853	2511	4321	2133	3315.50	1.30	5.07	0.64	2.50	0.85
2007-08	809	2310	4321	2114	3156.75	1.37	5.34	0.67	2.61	0.92
2008-09	669	1924	3488	1634	2744.25	1.27	5.21	0.60	2.44	0.85
	11607	31397	66404	31982	45606.70	1.46	5.72	0.70	2.76	1.02

**DISTRIBUTION OF GROUSE HUNTS AND HARVEST THROUGH THE 2008-2009 SEASON**

**HUNTING EFFORT**

**HARVEST**

Week Beginning	No. of Trips	Percent of Total Trips	Cumulative No. of Trips	Cumulative Percent	Percent of Total Harvest	Cumulative Percent
11OCT08	7	1.81	7	1.81	0.00	0.00
18OCT08	9	2.33	16	4.15	5.45	5.45
25OCT08	16	4.15	32	8.29	3.64	9.09
01NOV08	11	2.85	43	11.14	0.00	9.09
08NOV08	25	6.48	68	17.62	5.45	14.55
15NOV08	24	6.22	92	23.83	5.45	20.00
22NOV08	18	4.66	110	28.50	3.64	23.64
29NOV08	15	3.89	125	32.38	9.09	32.73
06DEC08	19	4.92	144	37.31	1.82	34.55
13DEC08	19	4.92	163	42.23	5.45	40.00
20DEC08	14	3.63	177	45.85	5.45	45.45
27DEC08	31	8.03	208	53.89	7.27	52.73
03JAN09	16	4.15	224	58.03	3.64	56.36
10JAN09	18	4.66	242	62.69	3.64	60.00
17JAN09	18	4.66	260	67.36	1.82	61.82
24JAN09	29	7.51	289	74.87	14.55	76.36
31JAN09	14	3.63	303	78.50	5.45	81.82
07FEB09	30	7.77	333	86.27	7.27	89.09
14FEB09	21	5.44	354	91.71	5.45	94.55
21FEB09	26	6.74	380	98.45	3.64	98.18
28FEB09	6	1.55	386	100.00	1.82	100.00

**GROUSE HARVEST DATA BY COUNTY (2008-2009)**

COUNTY	No. of Trips	No. of Hunters	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
ANDERSON	17	24	7	1	56.00	0.13	0.02	0.41	0.06	0.04
BLOUNT	6	6	0	0	15.25	0.00	0.00	0.00	0.00	0.00
CAMPBELL	66	89	85	7	251.50	0.34	0.03	1.29	0.11	0.08
CARTER	38	45	42	9	105.00	0.40	0.09	1.11	0.24	0.20
CLAIBORNE	9	15	18	5	33.00	0.55	0.15	2.00	0.56	0.33
COCKE	1	2	0	0	3.00	0.00	0.00	0.00	0.00	0.00
CUMBERLAND	5	7	9	0	28.50	0.32	0.00	1.80	0.00	0.00
FENTRESS	11	16	1	1	34.50	0.03	0.03	0.09	0.09	0.06
GRAINGER	9	17	31	4	24.00	1.29	0.17	3.44	0.44	0.24
GREENE	20	36	19	1	65.50	0.29	0.02	0.95	0.05	0.03
HANCOCK	12	24	46	1	45.00	1.02	0.02	3.83	0.08	0.04
HAWKINS	1	1	0	0	4.00	0.00	0.00	0.00	0.00	0.00
JOHNSON	30	54	38	7	100.00	0.38	0.07	1.27	0.23	0.13
LOUDON	3	3	0	0	10.00	0.00	0.00	0.00	0.00	0.00
MONROE	16	21	6	0	45.00	0.13	0.00	0.38	0.00	0.00
MORGAN	2	4	0	0	9.00	0.00	0.00	0.00	0.00	0.00
POLK	5	11	3	0	20.50	0.15	0.00	0.60	0.00	0.00
RHEA	11	11	0	0	38.00	0.00	0.00	0.00	0.00	0.00
SCOTT	34	49	61	8	142.50	0.43	0.06	1.79	0.24	0.16
SEQUATCHIE	5	12	0	0	7.00	0.00	0.00	0.00	0.00	0.00
SULLIVAN	23	30	29	5	59.00	0.49	0.08	1.26	0.22	0.17
UNICOI	28	37	36	5	76.25	0.47	0.07	1.29	0.18	0.14
WASHINGTON	12	14	11	1	28.25	0.39	0.04	0.92	0.08	0.07
	364	528	442	55	1200.75	0.37	0.05	1.21	0.15	0.10

**GROUSE HARVEST DATA BY SMALL GAME REGION (2008-2009)**

Small Game Region	No. of Trips	No. of Hunters	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
PLATEAU	123	177	156	16	473.00	0.33	0.03	1.27	0.13	0.09
EAST	241	351	286	39	727.75	0.39	0.05	1.19	0.16	0.11
	364	528	442	55	1200.75	0.37	0.05	1.21	0.15	0.10

**GROUSE HARVEST DATA BY MONTH (2008-2009)**

MONTH	No. of Trips	No. of Hunters	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
OCTOBER	28	33	24	5	78.50	0.31	0.06	0.86	0.18	0.15
NOVEMBER	66	95	66	9	196.50	0.34	0.05	1.00	0.14	0.09
DECEMBER	82	123	103	14	283.25	0.36	0.05	1.26	0.17	0.11
JANUARY	99	150	121	16	344.75	0.35	0.05	1.22	0.16	0.11
FEBRUARY	89	127	128	11	297.75	0.43	0.04	1.44	0.12	0.09
	364	528	442	55	1200.75	0.37	0.05	1.21	0.15	0.10

**GROUSE HARVEST DATA BY PUBLIC AREA (2008-2009)**

WMA	No. of Trips	No. of Hunters	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
Big South Fork NRRRA	3	6	0	0	12.50	0.00	0.00	0.00	0.00	0.00
Catoosa WMA	5	7	2	0	24.00	0.08	0.00	0.40	0.00	0.00
Cherokee WMA - North	134	188	154	22	388.50	0.40	0.06	1.15	0.16	0.12
Cherokee WMA - South	13	25	7	0	50.00	0.14	0.00	0.54	0.00	0.00
Foothills WMA	6	6	0	0	15.25	0.00	0.00	0.00	0.00	0.00
Royal Blue WMA	75	103	114	8	290.50	0.39	0.03	1.52	0.11	0.08
Sundquist WMA	4	8	12	2	22.00	0.55	0.09	3.00	0.50	0.25
TVA Reservoir Lands	1	1	0	0	2.50	0.00	0.00	0.00	0.00	0.00
Tellico Lake WMA	3	3	0	0	10.00	0.00	0.00	0.00	0.00	0.00
	244	347	289	32	815.25	0.35	0.04	1.18	0.13	0.09

**GROUSE HARVEST DATA, COMPARISON OF PRIVATE LAND VS. PUBLIC LANDS (2008-2009)**

Public or Private	No. of Trips	No. of Hunters	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
PRIVATE	120	181	153	23	385.50	0.40	0.06	1.28	0.19	0.13
PUBLIC	244	347	289	32	815.25	0.35	0.04	1.18	0.13	0.09
	364	528	442	55	1200.75	0.37	0.05	1.21	0.15	0.10

**GROUSE HUNTER SURVEY**

**1977 - 2008**

YEAR	No. of Party Trips	No. of Mandays	Grouse Flushed	Grouse Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Manday
1977-78	457	933	2905	651	2020.50	1.44	0.32	6.36	1.42	0.70
1978-79	244	445	1427	241	996.00	1.43	0.24	5.85	0.99	0.54
1979-80	460	880	3033	631	2149.00	1.41	0.29	6.59	1.37	0.72
1980-81	461	883	3228	633	1968.00	1.64	0.32	7.00	1.37	0.72
1981-82	420	823	2213	439	1841.00	1.20	0.24	5.27	1.05	0.53
1982-83										
1983-84	149	286	648	146	621.50	1.04	0.23	4.35	0.98	0.51
1984-85	350	653	1187	201	1398.50	0.85	0.14	3.39	0.57	0.31
1985-86	291	545	969	175	1166.00	0.83	0.15	3.33	0.60	0.32
1986-87	198	381	888	163	831.50	1.07	0.20	4.48	0.82	0.43
1987-88	227	381	1150	190	900.00	1.28	0.21	5.07	0.84	0.50
1988-89	555	972	1843	340	2264.50	0.81	0.15	3.32	0.61	0.35
1989-90	781	1405	3474	538	3222.00	1.08	0.17	4.45	0.69	0.38
1990-91	863	1470	3343	534	3489.30	0.96	0.15	3.87	0.62	0.36
1991-92	806	1447	2717	482	3375.00	0.81	0.14	3.37	0.60	0.33
1992-93	984	1772	3937	622	4039.20	0.97	0.15	4.00	0.63	0.35
1993-94	1017	1694	2960	435	3962.90	0.66	0.11	2.91	0.43	0.26
1994-95	1376	2339	5257	838	5448.25	0.96	0.15	3.82	0.61	0.36
1995-96	1074	1871	3054	498	3981.00	0.77	0.13	2.84	0.46	0.27
1996-97	982	1689	3178	484	3380.75	0.94	0.14	3.24	0.49	0.29
1997-98	992	1689	2900	463	3486.25	0.83	0.13	2.92	0.47	0.27
1998-99	879	1433	2201	307	3024.00	0.73	0.10	2.50	0.35	0.22
1999-00	860	1424	1992	275	2859.00	0.70	0.10	2.31	0.32	0.19
2000-01	755	1291	2354	332	2733.00	0.86	0.12	3.12	0.44	0.26
2001-02	731	1229	1921	301	2820.25	0.68	0.11	2.63	0.41	0.24
2002-03	545	807	1182	215	1967.25	0.60	0.11	2.17	0.39	0.27
2003-04	551	906	1179	180	1978.25	0.60	0.09	2.14	0.33	0.20
2004-05	569	849	1242	189	2082.50	0.60	0.09	2.18	0.33	0.22
2005-06	664	1004	1248	176	2318.25	0.54	0.08	1.88	0.27	0.18
2006-07	539	801	880	114	1857.50	0.47	0.06	1.63	0.21	0.14
2007-08	460	700	545	79	1601.50	0.34	0.05	1.18	0.17	0.11
2008-09	364	528	442	55	1200.75	0.37	0.05	1.21	0.15	0.10
Total/avg	19604	33530	65497	10927	73983.50	0.89	0.15	3.34	0.56	0.33

WOODCOCK HARVEST DATA BY COUNTY (2008-2009)

COUNTY	No. of Trips	No. of Hunters	Woodcock Flushed	Woodcock Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
ANDERSON	3	6	1	0	14.00	0.07	0.00	0.33	0.00	0.00
BLOUNT	1	1	0	0	2.75	0.00	0.00	0.00	0.00	0.00
CAMPBELL	16	20	0	0	64.00	0.00	0.00	0.00	0.00	0.00
CARTER	18	21	0	0	48.25	0.00	0.00	0.00	0.00	0.00
CLAIBORNE	1	2	0	0	2.50	0.00	0.00	0.00	0.00	0.00
COCKE	1	2	0	0	3.00	0.00	0.00	0.00	0.00	0.00
FENTRESS	5	7	2	1	13.00	0.15	0.08	0.40	0.20	0.14
GRAINGER	2	3	1	0	4.00	0.25	0.00	0.50	0.00	0.00
GREENE	6	12	0	0	16.00	0.00	0.00	0.00	0.00	0.00
HANCOCK	5	9	0	0	20.00	0.00	0.00	0.00	0.00	0.00
HAWKINS	1	1	0	0	4.00	0.00	0.00	0.00	0.00	0.00
HENRY	1	1	2	0	1.00	2.00	0.00	2.00	0.00	0.00
JOHNSON	9	16	0	0	34.00	0.00	0.00	0.00	0.00	0.00
LAWRENCE	1	1	2	0	5.00	0.40	0.00	2.00	0.00	0.00
LINCOLN	15	18	50	19	26.50	1.89	0.72	3.33	1.27	1.06
LOUDON	1	1	0	0	3.50	0.00	0.00	0.00	0.00	0.00
MONROE	3	3	0	0	9.75	0.00	0.00	0.00	0.00	0.00
OBION	1	1	2	0	2.00	1.00	0.00	2.00	0.00	0.00
SCOTT	8	12	2	1	34.00	0.06	0.03	0.25	0.13	0.08
SEQUATCHIE	2	5	0	0	2.00	0.00	0.00	0.00	0.00	0.00
SULLIVAN	4	6	0	0	5.50	0.00	0.00	0.00	0.00	0.00
UNICOI	12	16	0	0	31.25	0.00	0.00	0.00	0.00	0.00
WASHINGTON	5	7	0	0	13.50	0.00	0.00	0.00	0.00	0.00
WHITE	1	1	0	0	1.00	0.00	0.00	0.00	0.00	0.00
	122	172	62	21	360.50	0.17	0.06	0.51	0.17	0.12

**WOODCOCK HARVEST DATA BY MONTH (2008-2009)**

MONTH	No. of Trips	No. of Hunters	Woodcock Flushed	Woodcock Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Hunter Day
OCTOBER	16	13	10	5	24.50	0.41	0.20	1.00	0.50	0.38
NOVEMBER	82	180	57	17	404.50	0.14	0.04	0.47	0.14	0.09
DECEMBER	24	53	7	2	136.00	0.05	0.01	0.18	0.05	0.04
	122	172	62	21	360.50	0.17	0.06	0.51	0.17	0.12

WOODCOCK HUNTER SURVEY

1989 - 2008

YEAR	No. of Trips	No. of Man Days	Woodcock Flushed	Woodcock Bagged	Total Party Hours Hunted	Flushes Per Party Hour	Harvest Per Party Hour	Flushes Per Party Trip	Harvest Per Party Trip	Harvest Per Man Day
1989-90	350	623	175	43	1463.00	0.12	0.03	0.50	0.12	0.07
1990-91*	415	705	525	230	1678.50	0.31	0.14	1.27	0.55	0.33
1991-92	331	558	455	140	1228.00	0.37	0.11	1.37	0.42	0.25
1992-93	476	498	163	55	1853.70	0.09	0.03	0.34	0.12	0.07
1993-94	463	746	202	78	1670.70	0.12	0.05	0.44	0.17	0.10
1994-95	479	764	173	66	1745.50	0.10	0.04	0.36	0.14	0.09
1995-96	480	795	323	109	1728.25	0.19	0.06	0.67	0.23	0.14
1996-97	405	666	331	166	1377.25	0.25	0.12	0.82	0.41	0.25
1997-98**	251	371	234	74	828.25	0.28	0.09	0.93	0.29	0.20
1998-99	237	384	286	86	804.25	0.36	0.11	1.21	0.36	0.22
1999-00	258	396	107	26	773.50	0.14	0.04	0.41	0.10	0.07
2000-01	283	445	173	68	939.00	0.18	0.07	0.61	0.24	0.15
2001-02	228	346	269	82	730.25	0.36	0.11	1.18	0.36	0.24
2002-03	195	283	108	29	704.50	0.15	0.04	0.55	0.15	0.10
2003-04	158	232	133	38	518.50	0.26	0.07	0.84	0.24	0.16
2004-05	182	274	84	27	645.25	0.13	0.04	0.46	0.15	0.10
2005-06	210	311	110	30	676.75	0.16	0.04	0.52	0.14	0.10
2006-07	167	232	43	21	544.25	0.08	0.04	0.26	0.13	0.09
2007-08	171	246	74	24	565.00	0.13	0.04	0.43	0.14	0.10
2008-09	122	172	62	21	360.50	0.17	0.06	0.51	0.17	0.12
Total/avg	5861	9347	4030	1413	23825.90	0.17	0.06	0.69	0.24	0.15

\*Last year of February hunting

\*\*No December hunting

WOODCOCK HARVEST DATA BY WEEK, 2008

WEEK	No. of Trips	Percent of Total Trips	Woodcock Flushed	Percent Woodcock Flushed	Flushes Per Party Trip	Woodcock Bagged	Percent Woodcock Bagged
25OCT08	16	13.11	12	19.35	0.75	3	14.29
01NOV08	11	9.02	2	3.23	0.18	0	0.00
08NOV08	25	20.49	19	30.65	0.76	8	38.10
15NOV08	24	19.67	7	11.29	0.29	3	14.29
22NOV08	18	14.75	9	14.52	0.50	3	14.29
29NOV08	15	12.30	12	19.35	0.80	4	19.05
06DEC08	13	10.66	1	1.61	0.08	0	0.00
	122		62		0.51	21	