

## **2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey**

### **Summary**

Firearm license sales in 2007 (70,667) have declined to their lowest point since 1912. Resident firearm hunters live in every county of the state, and 76.7 percent of non-resident firearm hunters reside in the neighboring states of Delaware, New York and Pennsylvania. Although firearm hunters are nearly all male, the number of female hunters (1.7 percent) is increasing. The mean age of licensed firearm hunters is 43.8 years of age. Mail questionnaires were sent to 4,067 firearm hunters licensed during the 2007 calendar year (5.5 percent of all known firearm license holders) requesting harvest, recreational and economic information for the 2007-08 hunting season. Survey results estimated 29,083 firearm hunters actively pursued the 14 small game species and spent in excess of 14.7 million dollars (US, excluding license, permit and stamp fees) during the 2007-08 season. Active firearm hunters harvested an estimated 106,083 northern bobwhite, 64,634 chukar partridge, 23,958 crows, 1,952 ruffed grouse, 303,403 pheasants, 5,369 woodcock, 366 eastern coyotes, 81 gray fox, 407 red fox, 35,348 gray squirrels, 59,425 rabbits and hares, 2,563 raccoons and opossums, and 25,463 woodchucks while enjoying 381,511 recreation-days afield during 2007-08.

This survey was conducted as part of **Job III-B. Hunter and Trapper Harvest, Recreational and Economic Survey**. This job is included within **Grant Number W-68-R-12, New Jersey Wildlife Research and Management: Project III. Upland Wildlife and Furbearers**.

### **Remarks**

Harvest, recreational and economic data has been collected through mail surveys of 4,500 to 6,500 resident and non-resident, firearm license buyers. Since fiscal year 2000 (1999-2000), the survey has been conducted biennially. The mailing database for the 2007-08 Hunter Harvest Survey was compiled from a random sample of 2007 firearm hunting license buyers.

### **Methods**

A questionnaire designed to elicit demographic, hunter retention and participation, harvest, effort and economic data was mailed to 5.5 percent of the known firearm hunting population (4,067 resident and non-resident firearm licensees). The survey database was randomly developed from a list of license buyers supplied by the NJ Division of Fish and Wildlife's licensing section. The completed database was reviewed for errors before mailing labels were prepared. Return data were entered into a MS Access database and analyzed using MS Excel.

The total small-game hunter population estimate was based on all survey respondents and is not additive in relation to the 14 game species for which harvest information was requested.

For northern bobwhite and ring-necked pheasants, respondents were asked whether they hunted for released, pen-reared birds (on Division stocked wildlife management areas, semi-wild properties, commercial preserves, or individually purchased), or for presumed wild birds on non-stocked public or private lands. All efforts expended toward hunting chukar partridge were presumed a result of released, pen-reared. For American woodcock, respondents were asked whether they hunted in the North or South Zone. For gray squirrel and woodchuck, respondents were asked whether they hunted with a rifle or shotgun. The estimated number of hunters, mean hunter harvest and harvest for these species was based on all respondents who pursued these species, regardless of location or method of harvest.

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Survey analyses were combined where target species were similar, such as canines (eastern coyote, gray fox and red fox) and rabbits or hares, or where hunting occurred only at night (opossum or raccoon).

### Discussion

#### Firearm License Sales

New Jersey firearm license sales reached its historical apex in 1930 when 199,234 licenses were issued. Following the Depression-era low of 80,484 (1933), sales increased to its post-World War II peak of 190,418 (1971). Eligible National Guard personnel have been entitled to free licenses, permits and stamps since 1994. Disabled Veterans have been similarly entitled since 2000. Youth hunters in the 10 through 15-year old age class have received a firearm license upon completion of a hunter safety course since 2000. Youth licenses are valid through the calendar year in which the holder reaches the age of 16 years. The Jr./Sr. Firearm License was discontinued in 2000 and replaced by the Senior Firearm License (2000). A summary of New Jersey firearm hunting license sales for the last eleven years is provided in Table 1. Firearm license sales have declined 28.7 percent during the period 1997-2007, inclusive.

Table 1. New Jersey hunting licenses sales by category and calendar year (1997 – 2007).

Year	All Around Sportsman	Resident Firearm	Juvenile Firearm	Jr./Sr. Hunting	Total Resident Licenses	Non-Res. Small Game	Non-Resident Hunting	Total Firearm Licenses
1997	15,623	66,863	3,812	8,936	95,234	1,097	2,816	99,147
1998	17,174	63,897	4,110	9,083	94,264	1,114	3,098	98,476
1999	16,915	59,707	3,991	8,764	89,377	1,038	3,109	93,524
2000	17,123	60,085		6,727 <sup>1</sup>	83,935	968	3,251	87,186
2001	16,424	56,574		6,364	79,362	1,026	3,158	83,546
2002	15,663	54,106		6,319	76,088	939	3,207	80,234
2003	15,628	52,315		6,418	74,361	851	3,299	78,511
2004	15,437	50,188		6,538	72,163	965	3,330	76,458
2005	14,997	48,594		6,635	70,226	944	3,359	74,529
2006	15,470	47,340		7,198	70,008	943	3,592	74,543
2007	15,688	43,232		7,441	66,361	730	3,576	70,667

#### License Sampling

Six types of firearm licenses are issued in New Jersey (Resident Firearm [RF], All-Around Sportsmen [AA], Senior Resident Firearm [SF], Non-Resident Firearm [NF], Non-Resident Two-day Small Game [NRSRG] and Youth Firearm [YF]). License sales (2007) from all firearm licenses totaled 70,667. The object was to obtain information from approximately 2 percent of the firearm hunter population. Of the 4,067 survey forms mailed, only 93 (2.3 percent) were returned as undeliverable compared to 341 (7.7 percent) of the 4,438 surveys mailed in 2006.

Non-delivery was greatly reduced through the computerization of the Division's license sale process (Point-of-Sale, POS) that was fully implemented in 2007. POS eliminated issues of handwriting legibility and insufficient address. The mailing database was available more readily, thereby saving Division personnel time and effort, and likely reduced the number of surveys returned due to recipient mobility.

<sup>1</sup> Junior Firearm License discontinued. Figure represents sales of Senior (age 65+) Firearm Licenses only.

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Of the 3,974 questionnaires delivered, 1,806 (45.4 percent) were completed and returned within the acceptable period. Survey response rates from the previous survey was approximately 23 percent resulting from the intentional omission of a pre-paid reply envelope as a cost-saving measure.

### Age of Firearm Hunters

Firearm hunter ages were calculated based on the date of birth provided on their 2007 hunting license. Ages ranged from 10 to 95 with a mean of 43.8 years ( $n = 73,461$ ), as of 28 September 2007. Table 2 illustrates recipient age classes. New Jersey's hunters are aging, but are also continuing to hunt longer in life. Recruitment of younger hunters (less than 34 years of age) and retention of existing hunters will present future challenges to the NJ Division of Fish and Wildlife.

Table 2. Age class of New Jersey firearm license hunters, by license type (2007)

Age Class	AA	RF	SF	NF	NRSG	YF	Total	% Total
< 16	0	22	0	0	0	2,374	2,396	3.3%
16 to 24	888	5,243	0	189	51	420	6,791	9.2%
25 to 29	812	2,860	0	173	60	0	3,905	5.3%
30 to 34	1,339	3,186	0	243	79	0	4,847	6.6%
35 to 39	2,193	4,654	0	390	104	0	7,341	10.0%
40 to 44	2,675	6,253	0	523	99	0	9,550	13.0%
45 to 49	2,679	6,783	0	504	108	0	10,074	13.7%
Age Class	AA	RF	SF	NR	NR2D	Y	Total	% Total
50 to 54	2,075	5,657	0	455	68	0	8,255	11.2%
55 to 59	1,619	4,453	0	399	58	0	6,529	8.9%
60 to 64	1,298	3,799	41	303	50	0	5,491	7.5%
> 65	110	322	7400	397	53	0	8,282	11.3%
Unknown	0	0	0	0	0	0	0	0.0%
Total	15,688	43,232	7,441	3,576	730	2,794	73,461	100.0%
Mean	44.0	42.6	71.5	47.4	43.7	13.3	43.8	
95% CI	0.2	0.1	1.2	0.4	1.0	0.1		

### Residence

New Jersey residents constitute the majority of firearm license buyers (68,828 or 93.7 percent). Firearm hunter numbers by county range from 785 (Hudson) to 6,165 (Ocean). More firearm hunters reside in the state's northern region (39.1 percent) than its central (32.4 percent) or southern (28.6 percent) regions<sup>2</sup>. Hunters from 46 US states, three districts or territories and three foreign nations purchased a 2007 New Jersey hunting license. The neighboring states of Delaware, New York and Pennsylvania totaled 3,554 (76.7 percent of the 4,633 non-resident license buyers). Over one-half of non-resident firearm hunters (2,516 or 54.3 percent) came from Pennsylvania in 2007. The information is provided in Table 3 and Table 4.

Table 3. New Jersey resident firearm hunters, by license type and county (2007)

County	AA	RF	SF	NF	NRSG	YF	Total	% Total
Atlantic	660	2,472	401	0	0	194	3,727	5.4%
Bergen	566	1,740	388	0	0	92	2,786	4.0%
Burlington	1,403	3,418	574	1	1	184	5,581	8.1%

<sup>2</sup> Northern region includes counties of Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union and Warren; Central region includes counties of Burlington, Mercer, Middlesex, Monmouth and Ocean; Southern region includes counties of Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem.

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Camden	555	2,159	313	0	0	110	3,137	4.6%
Cape May	225	1,309	174	3	0	77	1,788	2.6%
Cumberland	810	2,888	402	1	0	220	4,321	6.3%
Essex	289	852	177	1	0	27	1,346	2.0%
Gloucester	822	2,639	383	2	0	149	3,995	5.8%
Hudson	141	531	102	2	0	9	785	1.1%
Hunterdon	872	1,806	376	3	0	144	3,201	4.7%
Mercer	591	1,389	321	0	1	53	2,355	3.4%
Middlesex	898	2,468	454	2	0	101	3,923	5.7%
Monmouth	975	2,688	423	1	0	159	4,246	6.2%
Morris	1,092	2,317	470	2	0	136	4,017	5.8%
Ocean	1,264	3,975	691	3	0	232	6,165	9.0%
Passaic	794	1,577	307	0	0	129	2,807	4.1%
Salem	514	1,803	251	1	0	122	2,691	3.9%
Somerset	510	1,071	273	2	0	47	1,903	2.8%
Sussex	1,466	2,799	411	2	1	237	4,916	7.1%
Union	282	1,068	206	0	0	30	1,586	2.3%
Warren	938	2,146	333	5	0	120	3,542	5.1%
Unknown NJ	1	8	0	1	0	0	10	---
Total	15,668	43,123	7,430	32	3	2,572	68,828	100.0%
% Total	22.8%	62.7%	10.8%	---	---	3.7%	100.0%	

Table 4. New Jersey firearm hunters, by state (2007)

State	AA	RF	SF	NF	NRSRG	YF	Total	% Total
Alabama	0	0	0	9	0	0	9	---
Alaska	0	0	0	4	0	0	4	---
Arizona	0	0	0	4	0	0	4	---
Arkansas	0	0	0	1	0	0	1	---
California	0	2	0	10	5	0	17	---
Colorado	0	1	0	9	7	0	17	---
Connecticut	0	0	0	58	56	4	118	0.2%
Delaware	0	4	0	322	9	20	355	0.5%
DC	0	0	0	2	5	0	7	---
Florida	4	8	1	119	15	1	148	0.2%
Georgia	0	3	1	10	6	0	20	---
Hawaii	0	0	0	0	0	0	0	0.0%
Idaho	0	2	0	1	0	0	3	---
Illinois	0	0	0	3	8	0	11	---
Indiana	0	0	0	2	4	0	6	---
Iowa	0	0	0	1	1	0	2	---
Kansas	0	0	0	1	0	0	1	---
Kentucky	0	0	0	1	1	0	2	---
Louisiana	0	0	0	2	3	0	5	---
Maine	0	0	0	44	15	4	63	0.1%
Maryland	0	2	0	75	40	15	132	0.2%
Massachusetts	0	1	0	35	9	1	46	0.1%
Michigan	0	1	0	7	8	0	16	---
Minnesota	0	0	0	1	3	1	5	---
Mississippi	0	0	0	0	2	0	2	---

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State	AA	RF	SF	NF	NRSG	YF	Total	% Total
Missouri	0	0	0	3	0	1	4	---
Montana	1	1	0	4	4	0	10	---
Nebraska	0	0	0	0	0	0	0	0.0%
Nevada	0	0	0	2	0	0	2	---
New Hampshire	0	2	0	63	8	1	74	0.1%
New Jersey	15668	43123	7430	32	3	2572	68828	93.7%
New Mexico	0	0	0	1	0	0	1	---
New York	2	12	2	545	101	21	683	0.9%
North Carolina	0	1	0	44	19	4	68	0.1%
North Dakota	0	0	0	0	0	0	0	0.0%
Ohio	1	2	0	10	9	0	22	---
Oklahoma	1	2	0	1	0	0	4	---
Oregon	0	0	0	5	1	0	6	---
Pennsylvania	7	42	1	1985	337	144	2516	3.4%
Puerto Rico	0	0	0	2	0	0	2	---
Rhode Island	0	0	0	15	0	0	15	---
South Carolina	0	1	0	18	10	0	29	---
South Dakota	1	0	0	0	0	0	1	---
Tennessee	0	0	0	11	2	0	13	---
Texas	0	1	0	5	2	1	9	---
Utah	0	0	0	1	1	0	2	---
Vermont	0	2	0	55	4	2	63	0.1%
Virgin Islands	0	0	0	1	0	0	1	---
Virginia	0	8	0	31	25	1	65	0.1%
Washington	0	0	0	1	1	0	2	---
West Virginia	0	0	0	3	4	0	7	---
Wisconsin	0	0	0	5	1	0	6	---
Wyoming	0	0	0	1	0	0	1	---
Unknown (US)	3	11	6	3	0	1	24	---
Canada	0	0	0	6	1	0	7	---
Germany	0	0	0	1	0	0	1	---
Hungary	0	0	0	1	0	0	1	---
Total	15,688	43,232	7,441	3,576	730	2,794	73,461	100.0%
	21.4%	58.9%	10.1%	4.9%	1.0%	3.8%	100.0%	

### Gender

Prior surveys have shown hunting to be a male dominated activity. According to the 2004 survey, 1.4 percent of firearm hunters were female. Gender information for 2007 is presented in Table 5 below. Outreach programs such as Becoming an Outdoor Woman (BOW) may be encouraging participation by females.

Table 5. Gender of New Jersey firearm hunters, by license type (2007)

Gender	AA	RF	SF	NF	NRSG	YF	Total	% Total
Male	15,496	42,253	7,402	3,524	721	2,526	71,992	97.9%
Female	186	965	31	50	9	265	1,506	2.1%
Unknown	6	14	8	2	0	3	33	---
Total	15,688	43,232	7,441	3,576	730	2,794	73,461	100.0%
% Female	1.2%	2.2%	0.4%	1.4%	1.2%	9.5%	2.1%	

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### Hunting Club Membership

Survey recipients were not asked if they belonged to a New Jersey hunting club in the current survey. An estimated 24,274 sportsmen belonged to a New Jersey hunting club in 2004 according to that year's survey.

### Hunting Activity and Recreation days

Survey recipients (n = 3,974) were asked if they pursued any of the 14 small game species of interest. Two-fifths of survey respondents (715 of 1,806) indicated they hunted small game during the 2007-08 season. Therefore, an estimated 29,083 firearm hunters actively pursued small game during the 2007-08 season compared to 35,411 firearm hunters active during the 2005-06 season.

Respondents who indicated pursuing small game were asked to provide the total number of days spent hunting the 14 species for which a hunting season was authorized during 2007-08. Statewide, opening dates and season lengths varied by species. Woodcock had the shortest season (21 days in each zone [North and South], 41 days total) and woodchuck had the longest season (192 days). Sunday hunting is prohibited except on semi-wild properties and commercial shooting preserves for northern bobwhite, pheasants and chukar (127 and 244 days, respectively). The majority (54.5 percent) was active for 10 days or less. Only 14.1 percent of respondents were active for more than 25 days. Mean time afield was 13.1 days  $\pm$  1.1 per hunter. A summary small game hunting activity is presented in Table 6. Survey results estimated that small-game hunting generated 381,511 days of recreation for 29,083 sportsmen during the 2007-08 season.

Table 6. Recreation days realized by small game hunters in New Jersey during 2007-08.

Number of days	Number of respondents	Percent response	Est. hunters	Cumulative hunters	Percent cumulative hunters
1 to 5	229	32.0%	9,315	9,315	32.0%
6 to 10	161	22.5%	6,549	15,864	54.5%
11 to 15	88	12.3%	3,579	19,443	66.9%
16 to 20	72	10.1%	2,929	22,372	76.9%
21 to 25	29	4.1%	1,180	23,551	81.0%
26 to 30	35	4.9%	1,424	24,975	85.9%
31+	48	6.7%	1,952	26,928	92.6%
Unknown	53	7.4%	2,156	29,083	100.0%
Total	715	100.0%	29,083		

### 2007-08 Harvest

Active small game hunters were asked whether they specifically pursued each of the various small game species available, the number of days spent hunting, the primary county in which they hunted and the number of each species harvested. A summary of the estimated harvest is presented in Table 7. Survey results estimated that 106,083 northern bobwhite, 64,634 chukar partridge, 23,958 crows, 1,952 ruffed grouse, 303,403 pheasants, 5,369 woodcock, 366 eastern coyote, 81 gray fox, 407 red fox, 35,348 gray squirrel, 59,425 rabbits and hares, 2,242 raccoon, 25,463 woodchuck were harvested during the 2007-08 season.

The NJ Division of Fish and Wildlife purchased 11,800 northern bobwhite for the 2007-08 hunting season (80 released pre-season at each of 10 Wildlife Management Areas [WMA] and 5,500 released in-season at each of 2 WMA). The Division's Rockport Pheasant Farm pen-reared

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approximately 60,000 pheasants for release on 23 WMA. These actions provided recreational sport hunting opportunities for the 12,009 sportsmen that purchased a 2007 Pheasant and Quail Stamp, and the 2,572 known Youth Firearm hunters issued a free stamp. The higher than expected harvest estimates of these species on WMA may be a function of the survey (low sample size, hunter bias), natural reproduction of holdover birds, or independent releases by individual hunters.

The U.S. Fish and Wildlife Service estimated there were  $831 \pm 58\%$  active woodcock hunters who expended  $3,387 \pm 56\%$  days afield and harvested  $1,551 \pm 57\%$  woodcock in New Jersey during 2007-08 (Cooper, T. R., K. Parker, and R. D. Rau. 2008. American woodcock population status, 2008. U.S. Fish and Wildlife Service, Laurel, MD. 15 pp.). Additional information on the New Jersey's woodcock resource can be found in the Federal Aid in Wildlife Restoration Report **Job III-A. Migratory Upland Game Bird Surveys**. This job is included within **Grant Number W-68-R-12, New Jersey Wildlife Research and Management: Project III. Upland Wildlife and Furbearers**.

All successful coyote hunters were required by law to report their harvest to a Division Regional Law Enforcement Office within 24 hours. The reported hunter harvest was 60 (bow and arrow – 11; shotgun – 44; muzzleloading rifle – 5). Additional information on the New Jersey's coyote resource can be found in *Attachment 2 (2007-08 NJ Trapper Harvest, Recreational and Economic Survey)*, *Attachment 3 (2007-08 NJ Coyote and Fox Hunter Survey)*.

Additional information on the New Jersey's opossum and raccoon resources can be found in *Attachment 2 (2007-08 NJ Trapper Harvest, Recreational and Economic Survey)*.

### Semi-wild and Commercial Shooting Preserves

A semi-wild shooting preserve is defined as an area of land, 50 acres or more, with the boundary clearly defined and posted along all boundary line at intervals of not more than 200 feet with signs containing the following wording: **Semi-Wild Shooting Preserve – Licensed Under N.J.S.A. 23:3-29** along with the name and address of the licensee. Nearly 300 semi-wild shooting preserves totaling 60,400 acres were licensed for the 2007-08 hunting season. As of 13 August 2008, stocking and harvest reports from 153 operations were returned to the Division's Permit Section (51.3 percent). Stocking reports received from these 153 properties (32,012 acres) totaled 53,322 pheasants, 8,983 chukar partridge and 3,937 northern bobwhite. Reported harvests totaled 32,253 pheasants (60.5 percent), 4,701 chukar partridge (52.3 percent) and 1,676 northern bobwhite (42.6 percent) during 2007-08.

A commercial shooting preserve is defined as an area of land, 50 acres or more, with the boundary clearly defined and posted along all boundary line at intervals of not more than 200 feet with signs containing the following wording: **Commercial Shooting Preserve – Licensed Under N.J.S.A. 23:3-29** along with the name, address and the license number. Approximately 60 commercial shooting preserves totaling 21,300 acres were licensed for the 2007-08 hunting season. As of 13 August 2008, stocking and harvest reports from 28 operations were returned to the Division's Permit Section (46.7 percent). Stocking reports received from these 28 operations (15,781 acres) totaled 74,997 pheasants, 22,555 chukar partridge, 10,856 northern bobwhite, and 8,979 mallards. Reported harvests totaled 35,584 pheasants (47.4 percent), 14,176 chukar partridge (62.9 percent), 5,198 northern bobwhite (47.9 percent), and 5,843 mallards (65.1 percent).

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Table 7. Estimated 2007-08 harvest by species in New Jersey, based on survey results

Small Game Species	Season length (days)	Estimated number of hunters	Mean hunter harvest	95% CI (low)	95% CI (high)	Estimated harvest
Bobwhite quail, Division stocked	66	2,725	9.2	5.9	12.5	25,056
Bobwhite quail, semi-wild stocked	127	1,342	16.4	4.6	28.1	21,965
Bobwhite quail, commercial preserve	244	1,220	27.0	9.3	44.8	32,988
Bobwhite quail, hunter stocked	66-83	732	27.5	9.7	45.3	20,135
Bobwhite quail, wild (public land)	66-83	814	2.5	0.7	4.3	2,034
Bobwhite quail, wild (private land)	66-83	854	4.6	1.6	7.5	3,905
<b>Bobwhite total*</b>	<b>66-244</b>	<b>5,898</b>	<b>18.0</b>	<b>10.8</b>	<b>25.1</b>	<b>106,083</b>
Chukar partridge	83-244	4,149	15.6	7.3	23.8	64,634
Crow	120	2,563	9.3	5.4	13.3	23,958
Ruffed grouse	57	2,441	0.8	0.5	1.1	1,952
Pheasant, Division stocked	83	11,877	6.9	6.0	7.8	82,003
Pheasant, semi-wild stocked	127	6,101	17.7	13.6	21.8	107,995
Pheasant, commercial preserve	244	4,190	18.6	12.1	25.0	77,732
Pheasant, hunter stocked	83	2,074	13.4	5.2	21.6	27,782
Pheasant, wild (public land)	83	1,464	1.4	0.8	2.1	2,074
Pheasant, wild (private land)	83	1,464	4.0	1.7	6.2	5,817
<b>Pheasant total*</b>	<b>83-244</b>	<b>21,274</b>	<b>14.3</b>	<b>12.1</b>	<b>16.4</b>	<b>303,403</b>
Woodcock, North Zone	21	895	1.8	0.7	2.8	1,586
Woodcock, South Zone	21	610	5.0	3.0	7.0	3,051
Woodcock, both Zones	41	81	4.5	-0.9	9.9	366
<b>Woodcock total</b>	<b>41</b>	<b>1,627</b>	<b>3.3</b>	<b>1.6</b>	<b>5.0</b>	<b>5,369</b>
Eastern coyote	90	1,342	0.3	0.0	0.6	366
Gray fox	90	488	0.2	-0.1	0.4	81
Red fox	90	895	0.5	0.2	0.7	407
<b>Canine total</b>	<b>90</b>	<b>1,830</b>	<b>0.5</b>	<b>0.2</b>	<b>0.8</b>	<b>854</b>
Gray squirrel – shotgun only	117	5,898	5.5	4.3	6.7	32,622
Gray squirrel – ML rifle only	76	81	3.0	-0.9	6.9	244
<b>Squirrel total</b>	<b>76-117</b>	<b>6,101</b>	<b>5.8</b>	<b>4.5</b>	<b>7.0</b>	<b>35,348</b>
Rabbits and hares	83	9,803	6.1	4.6	7.5	59,425
Opossum	129	41	0.0			0
Raccoon	129	285	7.9	0.5	15.2	2,242
<b>Opossum and Raccoon total</b>	<b>129</b>	<b>366</b>	<b>7.0</b>	<b>-0.1</b>	<b>14.1</b>	<b>2,563</b>
Woodchuck – rifle or shotgun	75	1,749	8.4	5.8	11.1	14,765
Woodchuck – shotgun only	117	244	0.2	-0.2	0.5	41
<b>Woodchuck total</b>	<b>192</b>	<b>2,319</b>	<b>11.0</b>	<b>4.2</b>	<b>17.8</b>	<b>25,463</b>
<b>Grand Total*</b>		<b>29,083</b>				<b>629,053</b>

\* Total figures for northern bobwhite and pheasant were for all respondents who pursued these two species regardless of location. Categorical breakdowns are not additive in relation to the total figure provided. The total, small-game hunter population was based on all survey respondents and is not additive in relation to each separate species.



## Appendix A: 2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey

### Hunter Expenditures

Active, small game respondents were asked to estimate their 2007-08 expenditures for items such as food, clothing, gasoline and equipment (but excluding license, permit and stamp fees). The majority of respondents (71.9 percent) expended \$500 or less (mean = \$221). A summary of sportsmen expenditures is presented in Table 8. Survey results estimate that small-game hunting related activities provided over \$14.7 million to the State's economy during 2007-08, compared to \$11.1 million in 2005-06. In addition, the NJDFW received \$3.43 million from sales of firearm licenses and pheasant/quail stamps.

*Table 8. Estimated expenditures (US\$) by licensed New Jersey firearm hunters, 2007-08*

Range (US\$)	# Respondents	% Response	Average Hunter Expenditure (US\$)	Est. Number of Hunters	Total Est. Expenditure (US\$)
0	7	1.0%	---	285	---
1-100	161	22.5%	63	6,549	414,611
101-200	125	17.5%	170	5,085	866,604
201-300	93	13.0%	276	3,783	1,044,399
301-400	61	8.5%	383	2,481	949,990
401-500	67	9.4%	492	2,725	1,340,928
501-1,000	89	12.4%	805	3,620	2,915,580
1,001-5,000	58	8.1%	2,257	2,359	5,324,417
> 5,001	2	0.3%	10,250	82	833,860
No response	52	7.3%		2,115	
Total	715	100.0	508 ± 69	29,083	14,764,145

## Appendix A: 2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey

### 2007-08 Hunting season dates, bag limits and regulations

Species	Inclusive Dates	Hunting Hours	Daily Limits	Notes
Bobwhite quail	<b>North of Route 33:</b> Nov. 10 to Dec. 1 and Dec. 10, 11, 13-31, 2007 and Jan. 1 to Feb. 18, 2008  <b>South of Route 33:</b> Nov. 10 to Dec. 1 and Dec. 10, 11, 13-31, 2007 to Jan. 31, 2008	Sunrise to ½ hour after sunset	7 – North  4 - South	8:00 AM start on Nov. 10, 2007. A Pheasant and Quail Stamp is required on designated areas for hunters over age 16.
Coyote* and Fox	<b>Bow and Arrow only:</b> Sep. 29 to Nov. 9, 2007 <b>Firearm or Bow and Arrow:</b> Nov. 10, 2007 to Feb. 18, 2008	½ hour before sunrise to ½ hour after sunset	Coyote - 2 Fox – No limit	8:00 AM start on Nov. 10, 2007. Closed Dec. 3-8 and Dec. 12, 2007 but may be taken incidentally by deer hunters
Coyote* and Fox, <b>Special Permit Season</b>	<b>Firearm or Bow and Arrow:</b> Jan. 14 to Feb. 18, 2008	No restriction on hunting hours while in possession of a special season permit and hunting under the special provisions provided.	Coyote - 2 Fox – No limit	Calling and standing hunting only. Predator calling device must be in possession. <b>Rifle permit required if hunting with rifle or using shot size larger than #4.</b> Between the hours of ½ hour after sunset to ½ hour before sunrise, only 10 or 12 gauge shotguns with #4 to “T” size shot may be used.
Crow	Aug. 13, 2007 to Mar. 15, 2008** on <b>Mon., Thurs., Fri., &amp; Sat. only</b>	Sunrise to ½ hour after sunset	No limit	8 AM start on Nov. 10, 2007 Closed Dec. 3-8, 2007.
Sora Rail Virginia Rail	Sept. 1 – Nov. 8	½ hour before sunrise to sunset	25 in possession singly or in aggregate	HIP number required. Non-toxic shot regulations in effect after the regular waterfowl season begins.
Gallinule (moorhen) and Clapper rail	Sept. 1 – Nov. 8	½ hour before sunrise to sunset	10 each; 20 possession of each species	HIP number required. Non-toxic shot regulations in effect after the regular waterfowl season begins.
Gray Squirrel	Sept. 29 to Dec. 1** and Dec. 10, 11, 13-31, 2007 and Jan. 1 to Feb. 18, 2008	Sunrise to ½ hour after sunset	5	8:00 AM start on Nov. 10, 2007
Gray Squirrel Muzzleloading Rifle (.36 caliber or smaller)	Sept. 29 to Nov. 9, 2007** and Jan. 5 to Feb. 18, 2008	Sunrise to ½ hour after sunset	5	<b>Rifle permit required.</b> Designated areas only
Opossum & Raccoon	Oct. 1, 2007 to Mar. 1, 2008	1 hour after sunset to 1 hour before sunrise	No limit	<b>Rifle permit required if hunting with rifle</b> 7:41 PM start on Oct. 1 Closed Dec. 3-8 and Dec. 12, 2007
<b>Species</b>	<b>Inclusive Dates</b>	<b>Hunting Hours</b>	<b>Daily Limits</b>	<b>Notes</b>

## Appendix A: 2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey

Pheasant & Chukar	Nov. 10 to Dec. 1 and Dec. 10, 11, 13-31, 2006 and Jan. 1 to Feb. 18, 2008	Sunrise to ½ hour after sunset	Chukar – 7 Pheasant - 2	8:00 AM start on Nov. 10, 2007. A Pheasant and Quail Stamp is required on designated areas for hunters over age 16.
Rabbit, Hare and Jackrabbit	Nov. 10 to Dec. 1 and Dec. 10, 11, 13-31, 2007 and Jan. 1 to Feb. 18, 2008	Sunrise to ½ hour after sunset	Cottontail – 4 Hare – 1 Jackrabbit - 1	8:00 AM start on Nov. 10, 2007
Ruffed Grouse	Oct. 18 to Dec. 1** and Dec. 10, 11, 13-31, 2007	Sunrise to ½ hour after sunset	2	8:00 AM start on Nov. 10, 2007
Woodchuck - <b>Bow, Rifle or Shotgun</b>	Mar. 1 to Sept. 26, 2007 Mar. 1 to Oct. 1, 2008	Sunrise to ½ hour after sunset	No limit	Rifle permit required if hunting with rifle. Rifle hunting prohibited on State properties (see Small Game Regulations page XX).
Woodchuck – <b>Bow or Shotgun</b>	Sept. 29 to Dec. 1** and Dec. 10, 11, 13-31, 2007 and Jan. 1 to Feb. 18, 2008	Sunrise to ½ hour after sunset	No limit	8:00 AM start on Nov. 10, 2007
Woodcock	See Migratory Bird Regulations**	Sunrise to sunset	3	HIP number required. 8:00 AM start on Nov. 10, 2007

\* All harvested coyote must be reported to a regional Division Law Enforcement Office within 24 hours. Callers must identify themselves by name and daytime telephone number.

\*\* No firearm hunting is permitted on November 9, 2007 on those WMAs designated as Pheasant and Quail Stamp Areas.

# NJ Division of Fish and Wildlife

## 2007-08 FIREARM HUNTER SURVEY

Dear Fellow Hunter:

This is a copy of the 2007-08 season Firearm Hunter Survey. This survey contains questions about your hunting activities in New Jersey this past (2007-08) season. Kindly take a moment now to complete this survey and return it in the self-addressed envelope provided. Thank you in advance for providing the postage needed. The Division recognizes this inconvenience, but this small act will save us both time and money best directed elsewhere to your benefit.

The information you provide is anonymous. The information we receive in this survey will be used in evaluating, planning and improving hunting seasons in New Jersey and for determining harvest levels and trends for several species. Your reply is important to us even if you **did not** hunt or even if you were not successful harvesting any game this year.

Thank you for completing this questionnaire and for promptly returning it in the envelope provided.

Sincerely,

Larry Herrighty,  
Assistant Director  
NJ Division of Fish and Wildlife

### HOW TO COMPLETE THIS SURVEY

1. Please answer all applicable questions. Answer this questionnaire even if you did not hunt or if you did not harvest any game during the past season.
2. Estimate the number of days hunted or game killed if you don't recall the exact number. Please list specific numbers where they're asked for in days; please don't write in "week" or "month".
3. Please report **only** the game taken by **you**, not the entire hunting party. For example, if you were hunting with a friend who shot two pheasants while you shot only one, you would report 1 pheasant.
4. Record your answers in the space provided after each question.
5. After completing the questionnaire, return it in the envelope provided.

## Appendix A: 2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey

### 2007-08 New Jersey Firearm Hunter Harvest Survey

1. Between July 1, 2007 and Feb. 18, 2008, did you hunt upland game in NJ? (Yes / No) \_\_\_\_\_

If you answered **NO** to Question #1, STOP HERE and return the survey. Otherwise please continue.

2. How many *total* days did you spend hunting upland game in NJ during this time? \_\_\_\_\_ Days

3. How much would you estimate you spent while hunting upland game in NJ during this time on food, clothing, gasoline, equipment, etc., (but excluding license, permit & stamp fees)? \$ \_\_\_\_\_ Total spent

Please provide the harvest information requested for each species taken **by you** on the following table. There are several parts to each question, so please take your time completing this portion of the survey.

Upland Small Game Species	A. Hunted specifically for species? (Yes/No)	B. Number of days hunted	D. Number of animals harvested	E. Primary county hunted
4. Bobwhite quail – Division stocked on <i>Public</i> lands (e.g., Greenwood or Peaslee WMA only)				
5. Bobwhite quail – Hunting Club stocked (e.g., on licensed, SEMI-WILD property only)				
6. Bobwhite quail – Commercially stocked (e.g., on licensed COMMERCIAL preserve only)				
7. Bobwhite quail – Privately stocked (e.g., purchased and released for the gun by YOU)				
8. Bobwhite quail - wild birds on <i>Public</i> lands (e.g., not stocked by Div. Fish & Wildlife)				
9. Bobwhite quail - wild birds on PRIVATE lands only (e.g., not Semi-wild, Commercial or self-stocked)				
10. Chukar partridge				
11. Crow				
12. Grouse				
13. Pheasant – Division stocked on <i>Public</i> lands (e.g., any of the 23 WMA where Stamp required)				
14. Pheasant – Hunting Club stocked (e.g., on licensed, SEMI-WILD property only)				
15. Pheasant – Commercially stocked (e.g., on licensed COMMERCIAL preserve only)				
16. Pheasant – Privately stocked (e.g., purchased and released for the gun by YOU)				
17. Pheasant - wild birds on <i>Public</i> lands only (e.g., not stocked by Div. Fish & Wildlife)				
18. Pheasant - wild birds on PRIVATE lands only (e.g., not Semi-Wild, Commercial or self-stocked)				
19. Woodcock (North Zone only) (e.g., Oct. 18 – Nov. 10)				
20. Woodcock (South Zone only) (e.g., Nov. 10-24 and Dec. 21-29)				
21. Coyote (Do <b>not</b> incl. Jan. 14 – Feb. 18 Special Permit Season)				

## Appendix A: 2007-08 NJ Firearm Hunter Harvest, Recreational and Economic Survey

Upland Small Game Species	A. Hunted specifically for species? (Yes/No)	B. Number of days hunted	D. Number of animals harvested	E. Primary county hunted
<b>22. Fox, gray</b> (Do <b>not</b> incl. Jan. 14 – Feb. 18 Special Permit Season)				
<b>23. Fox, red</b> (Do <b>not</b> incl. Jan. 14 – Feb. 18 Special Permit Season)				
<b>24. Gray squirrel – shotgun only</b>				
<b>25. Gray squirrel – Muzzleloader season only</b> (e.g., Sept. 29 – Nov. 9 and Jan. 5 – Feb., 18)				
<b>26. Hares / rabbits</b>				
<b>27. Opossum</b>				
<b>28. Raccoon</b>				
<b>29. Woodchuck – rifle or shotgun (July 1 – Sept. 26)</b>				
<b>30. Woodchuck – shotgun only (Sept. 29 – Feb. 18)</b>				

The survey is now **complete**. Kindly return the survey in the self-addressed envelope provided, or mail to *NJ Division of Fish and Wildlife, Northern Region Office, 26 Rt. 173 West, Hampton, NJ 08827, Attn: Joseph Garris*. Thank you for participating in this year's Firearm Hunter Survey. Survey results will be posted during Summer 2008 on the Division's website (<http://www.njfishandwildlife.com>). The NJ Division of Fish and Wildlife values your input and the information you provided.