

2009-10 NJ Firearm Hunter Harvest, Recreational and Economic Survey

Summary

Firearm license sales in 2009 (72,585) have risen slightly (2.7%) since 2007. Resident firearm hunters live in every county of the state, and 79.9 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 (2.1 percent) is increasing. The mean age of licensed firearm hunters is 45.8 years of age. Mail questionnaires were sent to 4,582 firearm hunters licensed during the 2009 calendar year (6.5 percent of all known firearm license holders) requesting harvest, recreational and economic information for the 2009-10 hunting season. Survey results estimated 25,335 firearm hunters actively pursued the 14 small game species and spent in excess of 11.1 million dollars (US, excluding license, permit and stamp fees) during the 2009-10 season. Active firearm hunters harvested an estimated 59,370 northern bobwhite, 14,434 chukar partridge, 24,813 crows, 2,338 ruffed grouse, 220,049 pheasants, 3,885 woodcock, 696 eastern coyotes, 784 gray fox, 1,281 red fox, 43,612 gray squirrels, 64,347 rabbits and hares, 1,515 raccoons and opossums, and 38,344 woodchucks while enjoying 385,241 recreation-days afield during 2009-10.

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-14, 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. The survey has been conducted biennially since fiscal year 2000 (1 July 1999-30 June 2000). The 2009-10 Hunter Harvest Survey mailing database was compiled from a random sample of 2009 firearm hunting license buyers.

Methods

A questionnaire designed to elicit demographic, hunter retention and participation, harvest, effort and economic data was mailed to 6.5 percent of the known firearm hunting population (4,582 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 and ruffed grouse, respondents were asked whether they hunted in the North or South Zone. For canines, respondents were asked whether they hunted during the regular small game season or during the special permit season. For rabbits, respondents were asked whether they hunted during the new early season or during the traditional small game season. For gray squirrel and woodchuck, respondents were asked whether they hunted with a rifle

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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.

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 ten years is provided in Table 1. Firearm license sales have declined 17.7 percent during the period 2000-2009, inclusive.

Table 1. New Jersey hunting licenses sales by category and calendar year (2000 – 2009).

Year	All Around Sportsman	Resident Firearm	Juvenile Firearm	Jr./Sr. Hunting	Total Resident Licenses	Non-Res. Small Game	Non-Resident Hunting	Total Firearm Licenses
2000	17,123	60,085		6,727 ¹	83,935	968	3,251	87,154
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	15,490	47,343		7,224	70,057	945	3,956	74,598
2007	15,641	43,116		7,424	66,181	881	3,565	70,627
2008	15,226	43,593		7,578	66,397	857	3,563	70,817
2009	15,730	42,616		7,854	66,200	838	3,651	72,585

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 (2009) from all firearm licenses totaled 72,592. The object was to obtain information from approximately 2 percent of the firearm hunter population. Of the 4,582 survey forms mailed, only 116 (2.5 percent) were returned as undeliverable compared to 93 (2.3 percent) of the 4,067 surveys mailed in 2007.

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

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

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Division personnel time and effort, and likely reduced the number of surveys returned due to recipient mobility. Of the 4,466 questionnaires delivered, 1,633 (36.6 percent) were completed and returned within the acceptable period.

Age of Firearm Hunters

Firearm hunter ages were calculated based on the date of birth provided on their 2009 hunting license. Ages ranged from 9 to 96 with a mean of 45.8 years (n = 71,753), as of 26 September 2009. 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 (2009)

Age Class	AA	RF	SF	NF	NRSG	YF	Total	% Total
< 16	0	13	0	0	0	1,781	1,794	2.5%
16 to 24	856	5,499	0	215	51	115	6,736	9.4%
25 to 29	812	2,873	0	182	58	0	3,925	5.5%
30 to 34	1,186	3,009	0	226	69	0	4,490	6.3%
35 to 39	1,878	4,090	0	363	96	0	6,427	8.9%
40 to 44	2,487	5,611	0	453	83	0	8,634	12.0%
45 to 49	2,714	6,685	0	553	92	0	10,044	14.0%
50 to 54	2,303	5,960	0	485	62	0	8,810	12.3%
55 to 59	1,679	4,532	0	412	60	0	6,683	9.3%
60 to 64	1,577	3,909	24	314	42	0	5,866	8.2%
≥ 65	249	429	7,830	449	63	0	9,020	12.6%
Unknown	0	0	0	0	0	0	0	0.0%
Total	15,741	42,610	7,854	3,652	676	1,896	71,753	100.0%
Median	45	45	70	48	43	12	47	
Mean	44.7	42.8	71.6	47.8	44.0	12.4	45.8	
SE	0.1	0.1	0.1	0.2	0.5	0.0	0.1	

Residence

New Jersey residents constitute the majority of firearm license buyers (67,897 or 93.7 percent). Firearm hunter numbers by county range from 768 (Hudson) to 6,200 (Ocean). More firearm hunters reside in the state's northern region (39.0 percent) than its central (32.2 percent) or southern (28.7 percent) regions². Hunters from 47 US states, the District of Columbia and 7 foreign nations purchased a 2009 New Jersey hunting license. The neighboring states of Delaware, New York and Pennsylvania totaled 3,475 (81.1 percent of the 4,284 non-resident license buyers). Over one-half of non-resident firearm hunters (2,461 or 57.4 percent) came from Pennsylvania in 2009. The information is provided in Table 3 and Table 4.

² 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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Table 3. New Jersey resident firearm hunters, by license type and county (2009)

County	AA	RF	SF	NF	NRSRG	YF	Total	% Total
Atlantic	660	2,451	434	2	0	97	3,644	5.4%
Bergen	512	1,746	373	1	0	59	2,691	4.0%
Burlington	1,416	3,356	601	1	0	143	5,517	8.1%
Camden	602	2,084	331	1	1	67	3,086	4.5%
Cape May	218	1,335	208	1	0	47	1,809	2.7%
Cumberland	832	2,899	424	1	0	125	4,281	6.3%
Essex	260	780	197	1	0	13	1,251	1.8%
Gloucester	892	2,582	367	1	0	136	3,978	5.9%
Hudson	124	526	107	1	0	10	768	1.1%
Hunterdon	841	1,785	405	4	0	99	3,134	4.6%
Mercer	599	1,315	316	3	1	43	2,277	3.3%
Middlesex	912	2,316	473	0	0	57	3,758	5.5%
Monmouth	1,011	2,589	454	4	0	90	4,148	6.1%
Morris	1,177	2,321	503	1	1	101	4,104	6.0%
Ocean	1,175	4,096	752	3	0	174	6,200	9.1%
Passaic	800	1,505	315	0	0	68	2,688	3.9%
Salem	538	1,798	265	1	0	90	2,692	4.0%
Somerset	478	1,128	255	2	1	47	1,911	2.8%
Sussex	1,438	2,762	496	3	0	152	4,851	7.1%
Union	301	1,036	211	1	0	28	1,577	2.3%
Warren	943	2,132	365	8	0	84	3,532	5.2%
Unknown NJ	0	8	0	0	0	0	8	---
Total	15,729	42,542	7,852	40	4	1,730	67,897	100.0%
% Total	23.2%	62.7%	11.6%	---	---	2.5%	100.0%	

Table 4. New Jersey firearm hunters, by state (2009)

State	AA	RF	SF	NF	NRSRG	YF	Total	% Total
Alabama	0	0	0	3	0	0	3	---
Alaska	0	0	0	4	0	1	5	---
Arizona	0	1	0	4	5	0	10	---
Arkansas	0	1	0	0	0	0	1	---
California	0	0	0	17	3	0	20	---
Colorado	0	1	0	6	4	3	14	---
Connecticut	0	2	0	49	36	0	87	0.1%
Delaware	0	5	0	346	26	11	388	0.5%
DC	0	0	0	1	3	0	4	---
Florida	1	0	0	132	18	2	153	0.2%
Georgia	0	0	0	17	8	0	25	---
Hawaii	0	1	0	0	1	0	2	---
Idaho	0	0	0	2	3	0	5	---
Illinois	1	1	0	4	7	1	14	---
Indiana	0	0	0	1	7	0	8	---
Iowa	0	0	0	2	2	0	4	---
Kansas	0	0	0	0	1	0	1	---
Kentucky	0	0	0	2	2	0	4	---
Louisiana	0	0	0	3	3	0	6	---
Maine	0	0	0	61	8	1	70	0.1%
Maryland	0	1	0	76	38	11	126	0.2%
Massachusetts	0	2	0	42	9	0	53	0.1%
Michigan	0	3	0	5	7	0	15	---
Minnesota	0	0	0	2	3	0	5	---
Mississippi	0	0	0	2	2	0	4	---

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Table 4. New Jersey firearm hunters, by state (2009)

State	AA	RF	SF	NF	NRSG	YF	Total	% Total
Missouri	0	0	0	3	5	0	8	---
Montana	1	0	0	5	3	0	9	---
Nebraska	0	0	0	0	1	0	1	---
Nevada	0	0	0	3	1	0	4	---
New Hampshire	0	2	0	63	10	2	77	0.1%
New Jersey	15729	42542	7852	40	4	1730	67897	93.7%
New Mexico	0	0	0	1	0	0	1	---
New York	4	8	0	496	99	19	626	0.9%
North Carolina	0	1	0	34	16	2	53	0.1%
North Dakota	0	0	0	1	0	0	1	---
Ohio	0	1	0	6	9	0	16	---
Oklahoma	0	0	0	2	0	0	2	---
Oregon	0	0	0	6	2	0	8	---
Pennsylvania	5	29	2	2,045	272	108	2461	3.4%
Puerto Rico	0	0	0	0	0	0	0	0.0%
Rhode Island	0	1	0	14	2	0	17	---
South Carolina	0	0	0	23	4	0	27	---
South Dakota	0	0	0	1	0	0	1	---
Tennessee	0	0	0	11	4	0	15	---
Texas	0	0	0	5	2	1	8	---
Utah	0	0	0	0	0	0	0	0.0%
Vermont	0	0	0	58	2	1	61	0.1%
Virgin Islands	0	0	0	0	0	0	0	0.0%
Virginia	0	8	0	33	37	3	81	0.1%
Washington	0	0	0	0	0	0	0	0.0%
West Virginia	0	1	0	4	2	0	7	---
Wisconsin	0	1	0	3	2	0	6	---
Wyoming	0	0	0	0	1	0	1	---
Unknown (US)	0	0	0	0	0	0	0	0.0%
Canada	0	0	0	8	2	0	10	---
Germany	0	0	0	1	0	0	1	---
Italy	0	0	0	1	0	0	1	---
Poland	0	0	0	1	0	0	1	---
Portugal	0	0	0	1	0	0	1	---
South Africa	0	0	0	1	0	0	1	---
Spain	0	0	0	1	0	0	1	---
Total	15,741	42,610	7,854	3,652	676	1,896	72,429	100.0%
	21.7%	58.8%	10.8%	5.0%	1.0%	2.6%	100.0%	

Gender

Prior surveys have shown hunting to be a male dominated activity. According to the 2008 survey, 2.1 percent of firearm hunters were female. Gender information for 2009 is presented in Table 5 below. Outreach programs such as Becoming an Outdoor Woman (BOW) may be encouraging participation by females.

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

Gender	AA	RF	SF	NF	NRSRG	YF	Total	% Total
Male	14,779	40,988	7,715	3,552	668	1,649	67,702	93.5%
Female	189	1,032	49	49	8	195	1,522	2.1%
Unknown	773	590	90	51	0	52	1,556	2.1%
Total	15,741	42,610	7,854	3,652	676	1,896	72,429	100.0%
% Female	1.2%	2.4%	0.6%	1.3%	1.2%	10.3%	2.1%	

Hunting Activity and Recreation days

Survey recipients (n = 4,466) were asked if they pursued any of the 14 small game species of interest. One-third of survey respondents (582 of 1,635) indicated they hunted small game during the 2009-10 season. Therefore, an estimated 25,335 firearm hunters actively pursued small game during the 2009-10 season compared to 29,083 firearm hunters active during the 2007-08 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 2009-10. 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 (191 days). Sunday hunting is prohibited except on semi-wild properties and commercial shooting preserves for northern bobwhite, pheasants and chukar (101 and 168 days, respectively). The majority (53.4 percent) was active for 10 days or less. Only 16.7 percent of respondents were active for more than 25 days. Mean time afield was 15.2 days \pm 0.7 per hunter. A summary small game hunting activity is presented in Table 6. Survey results estimated that small-game hunting generated 385,241 days of recreation for 25,335 sportsmen during the 2009-10 season.

Table 6. Recreation days realized by small game hunters in New Jersey during 2009-10.

Number of days	Number of respondents	Percent response	Est. hunters	Cumulative hunters	Percent cumulative hunters
1 to 5	173	29.7%	7,531	7,531	29.7%
6 to 10	138	23.7%	6,007	13,538	53.4%
11 to 15	82	14.1%	3,570	17,108	67.5%
16 to 20	58	10.0%	2,525	19,632	77.5%
21 to 25	30	5.1%	1,306	20,938	82.6%
26 to 30	37	6.3%	1,611	22,549	89.0%
31+	60	10.3%	2,612	25,161	99.3%
Unknown	4	0.7%	174	25,335	100.0%
Total	582	100.0%	25,335		

2009-10 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 59,370 northern bobwhite, 14,434 chukar partridge, 24,813 crows, 2,338 ruffed grouse, 220,049 pheasants, 3,885 woodcock, 696 eastern coyote, 784 gray fox, 1,281 red fox, 43,612 gray squirrel, 64,347 rabbits and hares, 1,450 raccoon, 38,344 woodchuck and 65 opossum were harvested during the 2009-10 season.

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The NJ Division of Fish and Wildlife purchased 11,800 northern bobwhite for the 2009-10 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 approximately 55,000 pheasants for release on 23 WMA. These actions provided recreational sport hunting opportunities for the 11,895 sportsmen that purchased a 2009 Pheasant and Quail Stamp, and the 1,896 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 $900 \pm 87\%$ active woodcock hunters who expended $3,900 \pm 63\%$ days afield and harvested $3,400 \pm 67\%$ woodcock in New Jersey during 2009-10 ([Cooper and Parker 2010](#)). 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-14, 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 63 (bow and arrow – 10; shotgun – 41; muzzleloading rifle – 12). Additional information on New Jersey's coyote resource can be found in *Attachment 2 (2009-10 NJ Trapper Harvest, Recreational and Economic Survey)*.

Additional information on New Jersey's opossum and raccoon resources can be found in *Attachment 2 (2009-10 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. A minimum 160 semi-wild shooting preserves totaling 64,264 acres were licensed for the 2009-10 hunting season and stocked a total 56,779 pheasants, 8,932 chukar partridge and 3,183 northern bobwhite. Reported harvests totaled 33,062 pheasants (58.2%), 5,404 chukar partridge (60.5%) and 1,203 northern bobwhite (37.8%) during 2009-10.

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. A minimum 34 commercial shooting preserves totaling 17,631 acres were licensed for the 2009-10 hunting season and stocked a total 67,153 pheasants, 21,358 chukar partridge, 14,939 northern bobwhite, and 8,249 mallards. Reported harvests totaled 36,213 pheasants (53.9%), 13,018 chukar partridge (61.0%), 7,159 northern bobwhite (47.9%), and 6,163 mallards (74.7%).

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Table 7. Estimated 2009-10 harvest by species in New Jersey, based on survey results

Small Game Species	Season length (days)	Estimated number of hunters	Mean hunter harvest	SE	Estimated harvest (low)	Estimated Harvest (high)
Bobwhite quail, Division stocked	66	1,567	14.0	3.1	17,082	26,798
Bobwhite quail, semi-wild stocked	101	653	9.8	2.8	4,602	8,196
Bobwhite quail, commercial preserve	168	958	21.7	6.4	14,664	26,836
Bobwhite quail, hunter stocked	66-79	784	8.6	1.8	5,335	8,160
Bobwhite quail, wild (public land)	66-79	1,349	1.9	0.6	1,672	3,389
Bobwhite quail, wild (private land)	66-79	1,437	2.8	0.7	2,939	4,962
Bobwhite total*	66-168	4,843	12.3	1.7	51,044	67,696
Chukar partridge	79-168	1,567	9.2	1.7	11,814	17,053
Crow	101	1,654	15.0	5.1	16,401	33,225
Ruffed grouse, North Zone	62	1,611	0.9	0.4	851	2,039
Ruffed grouse, South Zone	41	653	1.5	0.9	374	1,541
Grouse total*	41-62	2,133	1.1	0.4	1,541	3,135
Pheasant, Division stocked	79	11,057	7.5	0.6	76,030	89,300
Pheasant, semi-wild stocked	101	3,700	18.4	1.8	61,481	75,032
Pheasant, commercial preserve	168	2,089	20.4	3.8	34,694	50,539
Pheasant, hunter stocked	79	2,002	10.3	1.2	18,202	22,892
Pheasant, wild (public land)	79	1,654	1.8	0.6	2,006	4,088
Pheasant, wild (private land)	79	2,264	3.8	0.8	6,774	10,481
Pheasant total*	79-168	17,761	12.4	0.8	205,662	234,436
Woodcock, North Zone	21	1,306	2.4	0.9	1,924	4,227
Woodcock, South Zone	21	609	1.9	0.7	698	1,596
Woodcock total	41	1,654	2.3	0.8	2,492	5,279
Eastern coyote	110	2,742	0.3	0.1	362	1,030
Gray fox	110	914	0.9	0.6	251	1,316
Red fox	110	1,437	0.9	0.2	972	1,590
Canine total*	110	3,178	0.9	0.2	2,072	3,606
Gray squirrel – shotgun only	116	5,703	8.3	1.0	41,301	53,140
Gray squirrel – ML rifle only	69	305	6.4	3.1	1,019	2,899
Squirrel total	69-116	5,615	7.8	0.8	39,026	48,199
Rabbits and hares, Early season only	37	3,482	3.3	0.4	10,166	12,994
Rabbits and hares, Traditional season	79	8,184	6.6	0.8	47,386	60,841
Rabbit total*	116	8,793	7.3	0.8	57,312	71,381
Opossum	111	44	1.5	0.6	37	93
Raccoon	111	392	3.7	1.2	971	1,928
Woodchuck – rifle or shotgun	79	2,525	14.6	3.2	28,868	45,015
Woodchuck – shotgun only	116	653	3.0	1.1	1,223	2,694
Woodchuck total*	191	2,917	13.1	2.8	30,318	46,371
Grand Total*		25,335			419,541	534,442

* Total figures for northern bobwhite, grouse, pheasant, woodcock, coyote/fox, rabbit/hare and woodchuck were for all respondents who pursued these species regardless of location or season period. Categorical breakdowns are not

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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.

Hunter Expenditures

Active, small game respondents were asked to estimate their 2009-10 expenditures for items such as food, clothing, gasoline and equipment (but excluding license, permit and stamp fees). The majority of respondents (83.2%) expended \$500 or less (mean = \$195). A summary of sportsmen expenditures is presented in Table 8. Survey results estimate that small-game hunting related activities provided over \$11.1 million to the State's economy during 2009-10, compared to \$14.7 million in 2007-08. In addition, the NJDFW received \$3.435 million from sales of firearm licenses and pheasant/quail stamps.

Table 8. Estimated expenditures (US\$) by licensed New Jersey firearm hunters, 2009-10

Range (US\$)	# Respondents	% Response	Average Hunter Expenditure (US\$)	Est. Number of Hunters	Total Est. Expenditure (US\$)
0	5	0.9%	---	218	---
1-100	160	27.5%	60	6,965	417,900
101-200	117	20.1%	179	5,093	911,647
201-300	65	11.2%	278	2,830	786,740
301-400	31	5.3%	382	1,349	515,318
401-500	46	7.9%	484	2,002	968,968
501-1,000	63	10.8%	816	2,742	2,237,472
1,001-5,000	47	8.1%	1,981	2,046	4,053,126
> 5,001	1	0.2%	8,000	44	3,520,000
No response	47	8.1%			
Total	582	100.0		25,335	11,145,405

Appendix A: 2009-10 NJ Firearm Hunter Harvest, Recreational and Economic Survey

2009-10 Hunting season dates, bag limits and regulations

Species	Inclusive Dates	Hunting Hours	Daily Limits	Notes
Bobwhite quail	North of Route 33: Nov. 7 to Dec. 5 and Dec. 14, 15, 17-31, 2009 and Jan. 1 to Feb. 15, 2010	Sunrise to ½ hour after sunset	7 – North 4 - South	8:00 AM start on Nov. 7. A Pheasant and Quail Stamp is required on designated areas for hunters over age 16.
	South of Route 33: Nov. 7 to Dec. 5 and Dec. 14, 15, 17-31, 2009 to Jan. 31, 2010			
Coyote* and Fox	Bow and Arrow only: Oct. 3 to Nov. 6, 2009 Firearm or Bow and Arrow: Nov. 7, 2009 to Feb. 15, 2010	½ hour before sunrise to ½ hour after sunset	No limit	8:00 AM start on Nov. 7. Closed Dec. 7-12 and Dec. 16, 2009 but may be taken incidentally by deer hunters
Coyote* and Fox, Special Permit Season	Firearm or Bow and Arrow: Jan. 1 to Mar. 15, 2010	No restriction on hunting hours while in possession of a special season permit and hunting under the special provisions provided.	No limit	Calling and standing hunting only. Predator calling device must be in possession. Rifle permit required if hunting with rifle or using shot size larger than #4. 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. 10 to Dec. 5** and Dec. 14, 2009 to Mar. 20, 2010 on Mon., Thurs., Fri., & Sat. only	Sunrise to ½ hour after sunset	No limit	8 AM start on Nov. 7 Closed Dec. 7-12, 2009.
Grouse	North Zone: Oct. 15 to Dec. 5** and Dec. 14, 15, 17-31, 2009	Sunrise to ½ hour after sunset	2	8:00 AM start on Nov. 7
	South Zone: Nov. 7 to Dec. 5 and Dec. 14, 15, 17-31, 2009			
Opossum & Raccoon	Oct. 1, 2009 to Mar. 1, 2010	1 hour after sunset to 1 hour before sunrise	No limit	Rifle permit required if hunting with rifle 7:41 PM start on Oct. 1 Closed Dec. 7-12 and Dec. 16, 2009
Pheasant & Chukar	Nov. 7 to Dec. 5 and Dec. 14, 15, 17-31, 2009 and Jan. 1 to Feb. 15, 2010	Sunrise to ½ hour after sunset	Chukar – 7 Pheasant - 2	8:00 AM start on Nov. 7. A Pheasant and Quail Stamp is required on designated areas for hunters over age 16.
Rabbit, Hare and Jackrabbit	Sep. 26 to Dec. 5** and Dec. 14, 15, 17-31, 2009 and Jan. 1 to Feb. 15, 2010	Sunrise to ½ hour after sunset	Cottontail – 4 Hare – 1 Jackrabbit - 1	8:00 AM start on Nov. 7

Appendix A: 2009-10 NJ Firearm Hunter Harvest, Recreational and Economic Survey

Species	Inclusive Dates	Hunting Hours	Daily Limits	Notes
Squirrel	Sep. 26 to Dec. 5** and Dec. 14, 15, 17-31, 2009 and Jan. 1 to Feb. 15, 2010	Sunrise to ½ hour after sunset	5	8:00 AM start on Nov. 7
Squirrel Muzzleloading Rifle (.36 caliber or smaller)	Sept. 26 to Nov. 6, 2009** and Jan. 9 to Feb. 15, 2010	Sunrise to ½ hour after sunset	5	Rifle permit required. Designated areas only
Woodchuck - Bow, Rifle or Shotgun	Mar. 2 to Sept. 30, 2009 Mar. 1 to Oct. 1, Sep. 29, 2010	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 – Bow or Shotgun	Sep. 26 to Dec. 5** and Dec. 14, 15, 17-31, 2009 and Jan. 1 to Feb. 15, 2010	Sunrise to ½ hour after sunset	No limit	8:00 AM start on Nov. 7
Woodcock	North Zone: Oct. 15 to Nov. 7, 2009** South Zone: Nov. 7-28, 2009 and Jan. 1-2, 2010	Sunrise to sunset	3	HIP number required. 8:00 AM start on Nov. 7

* **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 6, 2009** on those WMAs designated as Pheasant and Quail Stamp Areas.

NJ Division of Fish and Wildlife

2009-10 FIREARM HUNTER SURVEY

Dear Fellow Hunter:

This is a copy of the 2009-10 season Firearm Hunter Survey. This survey contains questions about your hunting activities in New Jersey this past (2009-10) season. Kindly take a moment now to complete this survey and return it in the self-addressed envelope provided. The information you provide is anonymous.

The information we receive in this survey is 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 during the 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

Appendix A: 2009-10 NJ Firearm Hunter Harvest, Recreational and Economic Survey

2009-10 New Jersey Firearm Hunter Harvest Survey

1. Between July 1, 2009 and Feb. 15, 2010, 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 – Commercially stocked (e.g., on licensed, COMMERCIAL preserve only)				
6. Bobwhite quail – Semi-wild stocked (e.g., on licensed SEMI-WILD property 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 – North of Rt. 70				
13. Grouse – South of Rt. 70				
14. Woodcock – North of Rt. 70				
15. Woodcock – South of Rt. 70				
16. Pheasant – Division stocked on <i>Public</i> lands (e.g., any of the 23 WMA where Stamp required)				
17. Pheasant – Commercially stocked (e.g., on licensed, COMMERCIAL preserve only)				
18. Pheasant – Semi-wild stocked (e.g., on licensed SEMI-WILD property only)				
19. Pheasant – Privately stocked (e.g., purchased and released for the gun by YOU)				
20. Pheasant - wild birds on <i>Public</i> lands only (e.g., not stocked by Div. Fish & Wildlife)				
21. Pheasant - wild birds on PRIVATE lands only (e.g., not Semi-Wild, Commercial or self-stocked)				
22. Coyote Small game season only (Nov. 7 – Feb. 15)				
23. Coyote Special Permit season only (Jan. 1 – Mar. 15)				

Appendix A: 2009-10 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
24. Gray fox Small game season only (Nov. 7 – Feb. 15)				
25. Gray fox Special Permit season only (Jan. 1 – Mar. 15)				
26. Red fox Small game season only (Nov. 7 – Feb. 15)				
27. Red fox Special Permit season only (Jan. 1 – Mar. 15)				
28. Rabbits & Hares Early season only (Sep. 26 – Nov. 6)				
29. Rabbits & Hares Traditional season only (Nov. 7 – Feb. 15)				
30. Opossum				
31. Raccoon				
32. Squirrel Shotgun only				
33. Squirrel ML Rifle season only				
34. Woodchuck – rifle or shotgun (July 1 – Sept. 30)				
35. Woodchuck – shotgun only (Sept. 26 – Feb. 15)				

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 2010 on the Division's website (<http://www.njfishandwildlife.com>). The NJ Division of Fish and Wildlife values your input and the information you provided.