

DAVE ADAMS



2011 VERMONT WILDLIFE HARVEST REPORT - BLACK BEAR



VERMONT

FISH & WILDLIFE DEPARTMENT
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Most of the programs described in this report are funded through the *Federal Aid in Wildlife Restoration Program*. This program was initiated in 1937 as the Federal Aid In Wildlife Act and created a system whereby taxes are paid on firearms, ammunition and archery equipment by the public who hunts. Today this excise tax generates over a hundred million dollars each year that are dedicated to state wildlife restoration and management projects across the United States. The State of Vermont uses these monies for acquiring land, and for restoring and managing wildlife. These excise tax dollars, coupled with state hunting license fees, have been the predominant source of money funding the successful restoration and management of Vermont’s wildlife resources.

2011 Vermont Black Bear Harvest Report

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The MISSION of the Vermont Fish & Wildlife Department is the conservation of fish, wildlife, and plants and their habitats for the people of Vermont.

Vermont Fish & Wildlife Department

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2011 Black Bear Report

Vermont's Black Bear Population

Vermont's black bear population is currently estimated at between 5,065 and 7,352 with a population model "best estimate" of just over 6,000 bears. This number has slowly increased over the past two decades in response to goals to increase the state's bear population as set forth in the past two Vermont bear management plans. During this time, the bear population was allowed to grow in size through a reduction in the length of the hunting season first implemented in 1990. Under the recently enacted Big Game Plan (2010-2020), the statewide bear population goal will be to maintain the population between 4,500 and 6,000 animals.

Black Bear Habitat

Vermont's black bear core habitat is made up of large tracts of unbroken remote forests. These areas of core habitat have historically had the highest density of bears, but with the recent increases in the bear population, bears are occurring in higher numbers in more fragmented habitat, often causing problems for both the bears and humans. As the state's human population approaches 650,000, land continues to be developed and subdivided into smaller parcels. This results in less available habitat for bears, fewer opportunities for hunters to access private land, and increase chances of human-bear conflicts. The department recognizes these problems and remains committed to public land acquisition programs that conserve wildlife habitat. There are currently over 800,000 acres of public land open to hunting under state or federal management. The Vermont Agency of Natural Resources manages more than 333,000 acres as wildlife management areas, state forests, and state parks. The Agency also holds easements on over 123,000 acres of conserved commercial forestlands that guarantee public access. The Green Mountain National Forest and Silvio Conte National Wildlife Refuge comprise most of the federally-owned public lands in the state.

The Vermont Fish & Wildlife Department also protects wildlife habitat through reviewing and making habitat development recommendations on projects requiring federal, state or local permits for potential impacts to fish, wildlife and related habitats. During 2011, we reviewed and evaluated hundreds of development projects. Of these, many projects involved significant bear habitat with concentrated areas of hard mast trees, forested wetlands used by bears, and black bear travel corridors. Since 1995, there have been more than 28,000 acres of significant bear habitat protected in Vermont through the environmental permitting process. Currently, department biologists are reviewing several large industrial wind projects proposed for remote areas that could potentially impact additional large acreages of significant bear habitats. Due to the general lack of data on the potential impacts of wind generation projects on black bears, we have initiated a long-term study on this issue in southern Vermont.



Public Education and Outreach

Biologists and game wardens gave bear presentations to communities and schools as requested. The bear biologist also attended several Vermont Bear Hound Association meetings and gave "Living with Vermont Black Bear" presentations in seven towns that were concerned over increased numbers of bear sightings in residential areas. Game wardens also responded to 179 complaints of black bears involving automobile collisions, causing property damage or potentially threatening public safety in 2011.

2011 Harvest Summary

In 2011, Vermont's 77-day bear season started on September 1 and ended November 16. The season terminated on the first Wednesday of the November firearms deer season, overlapping the deer season for five days. Licensed hunters took 396 black bears (165 females, 225 males and 6 unknowns) in Vermont during the 2011 season. This represents a decrease of 141 bears (26%) below the 2010 harvest of 537 bears, and a decrease of 109 bears (22%) from the 10-year average of 505 (Figure 1). Approximately 15 tons (an estimated 29,700 lbs.) of boneless bear meat were harvested. Table 5 provides the listing of harvest by county, town and sex.

Annual surveys of both soft and hard mast conducted by biologists indicated that food availability may have played a role in the low bear harvest in 2011. Beechnuts, a preferred fall food, were abundant. Soft mast includes soft juicy berries, wild cherries and apples, while hard mast includes beechnuts, acorns and hazelnuts. Vermont biologists go afield every year to assess mast availability because food in general affects bear reproduction success, seasonal movements and timing of hibernation. Mast availability also influences the distribution of the bear harvest, road kills and property damage. Survey results in 2011 indicated apple and beechnut production were higher than normal while acorns were sparse. Both apples

and acorns tend to occur at lower elevations. During years of good beechnut production, bears tend to feed at higher elevations more distant from roads. Bear harvests tend to be lower in years such as 2011 when beech mast is high, as bears travel less and forage at higher, more remote locations, making them less susceptible to being taken by hunters. Although the total harvest is lower during years of high beechnut production, the number of bears taken during the final days of the season during the overlap with the deer season is generally proportionally greater.

Bear management activities during 2011 continued to generate the information required to ensure the population is sustained at a level consistent with public desires. The current management program is based primarily on biological data collected during the mandatory bear harvest registration, population and habitat indexes, and surveys of public desires derived through a detailed public input process.

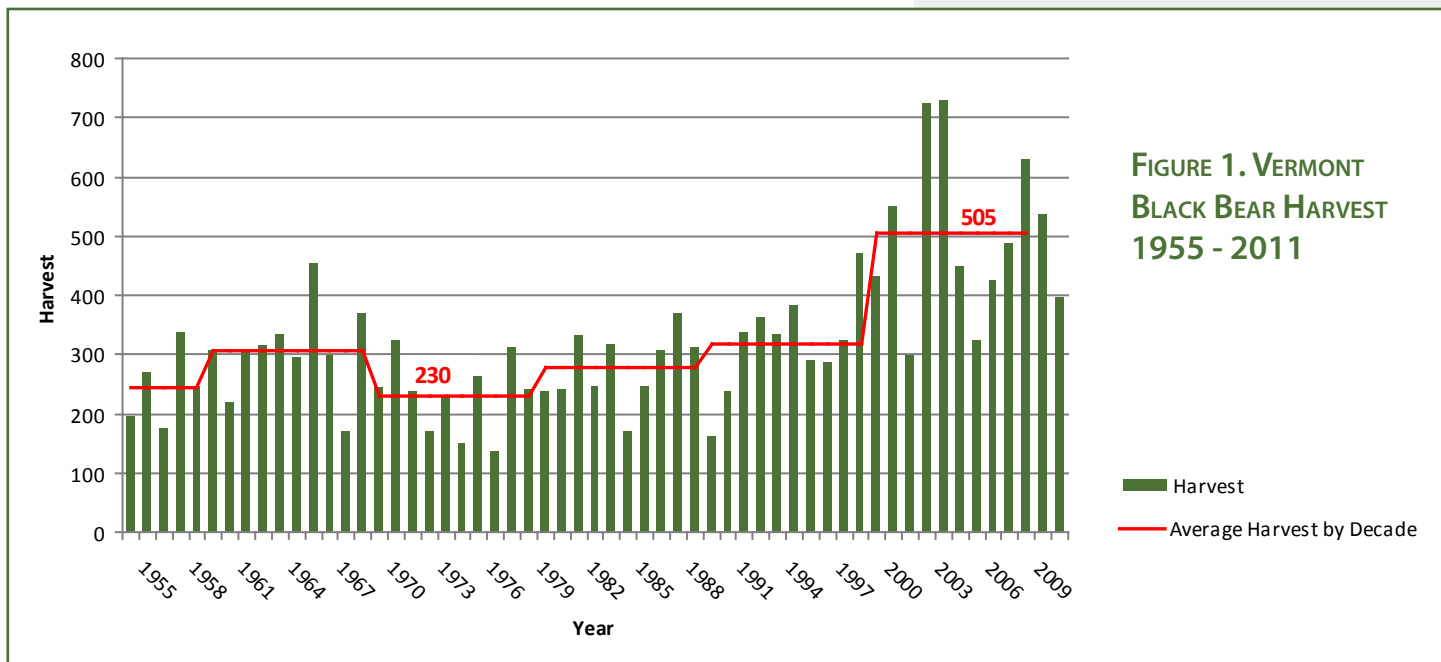
Harvest Distribution

Bears were harvested legally in all WMUs with the exception of WMUs A and K1. The largest numbers of bears were taken in WMUs D2 (45), E (41), P (34) and D1 (33) (Table 1). A substantial number (101 or 26%) were taken from nine WMUs (B, F1, F2, K2, M2, N, J1, J2 and O2) that, until the two most recent decades, were considered to be on the fringe of typical bear range and visited only infrequently by bears. The fact that 62% of the bears harvested in these nine WMUs were males suggests these areas may still have large numbers of bears dispersing from other WMUs long considered to be "core" habitat for bears in the state, as males tend to travel further than females.

Counties reporting the highest harvests were Essex (47), Orleans (45), Caledonia (40), and Bennington (38). Towns with the highest

TABLE 1. 2011 BEAR HARVEST BY SEX AND WMU

WMU	Total Harvested	Percent of Harvest	Female	Male	Unknown
A	0	0.0	0	0	0
B	12	3.0	4	8	0
C	22	5.6	12	10	0
D1	33	8.3	20	12	1
D2	45	11.4	24	20	1
E	41	10.3	10	30	1
F1	2	0.6	1	1	0
F2	10	2.5	3	7	0
G	14	3.5	8	6	0
H1	27	6.9	9	18	0
H2	10	2.5	5	4	1
I	17	4.3	7	9	1
J1	16	4.0	7	9	0
J2	25	6.3	8	16	1
K1	0	0.0	0	0	0
K2	5	1.3	1	4	0
L	8	2.0	2	6	0
M1	17	4.3	10	7	0
M2	3	0.8	1	2	0
N	18	4.5	7	11	0
O1	11	2.8	6	5	0
O2	10	2.5	6	4	0
P	34	8.6	10	24	0
Q	16	4.0	4	12	0
Total	396	100	165	225	6

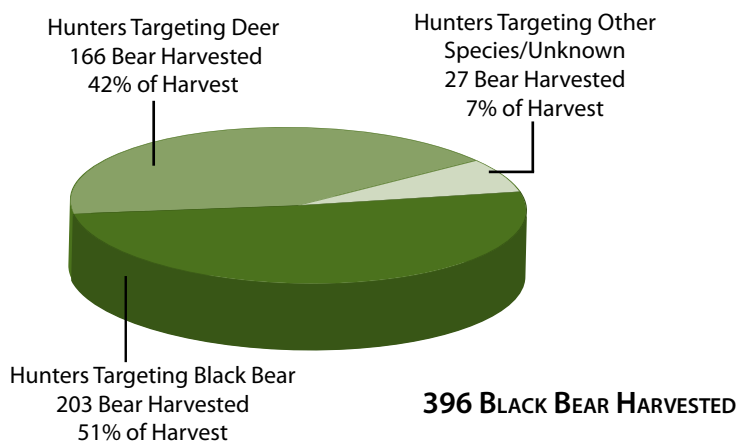


harvests were Pownal (7), Shaftsbury (7), and St. Johnsbury (7) (Figure 2 and Table 5). Fewer towns had bears harvested in them in 2011(156) than in either 2010 (176) or 2009 (188) due probably to the plentiful supply of beechnuts in 2011, which kept bears from traveling as widely in search of preferred foods.

Harvest by Hunting Opportunity

Bears in Vermont can be taken with the use of hounds, with firearms and by archers. Snaring and hunting with the use of bait is prohibited. All licensed hunters are potential bear hunters as a bear tag is provided with every general hunting license sold. The actual number of deer hunters that would take a bear if given the opportunity is unknown, as is the total number of bear hunters in the state.

During the 2011 season, 51% of the harvest was taken by hunters specifically targeting bears and 42% by opportunistic deer hunters. This increase in harvest by deer hunters is typical of years such as 2011 when beechnuts are plentiful. Archers took 5% and houndsmen accounted for 11% of the total bear harvest. Twenty-one percent of the harvest by hunters specifically hunting for bear involved using dogs. There were 95 bear hound permits issued (5 more than in 2010) with a tenth of them going to non-residents.



Total Bear Harvest For Hunting Seasons 1955-2011

The total bear harvest includes bears taken by hunters who used hounds and those who didn't use hounds. The number of bears taken fluctuates widely between some years as illustrated in Figure 1. The annual bear harvest has increased notably during the past two decades. Periodic fluctuations in harvest generally occur due to differences in food availability (especially beechnuts) and weather conditions, which also reflect changing vulnerability to hunters. A long-term trend in higher harvests is usually the result of an increasing population. The highest bear harvests in the past 55 years have been achieved in the last decade, with the third highest occurring in 2009. These historic high harvests are believed to reflect a strong bear population that is larger than in previous decades, and could indicate an increase in the number of hunters hunting specifically for bears.

TABLE 2. 2011 TIMING OF HARVEST

Period When Harvested	Number Harvested	Percent of Harvest
September	104	26%
October	71	18%
November	221	56%
<i>During Deer Season (11/12-11/16)</i>	<i>(210)</i>	<i>(53%)</i>

Timing of Harvest

Unlike the 2010 harvest where the majority of the harvest occurred during September and October (79%), only 44 % of the 2011 harvest occurred during those months (Table 2). Abundant fall foods and a lack of deep snows allowed black bears to delay their hibernation, making them available to hunters during November. In 2010, only 15% were taken during that part of the bear season that overlaps the November deer season. In 2011, 53% of the harvest occurred during the five day overlap with the November deer season. The relatively low harvest during the first two months of the bear season is believed to be due to changes in bear movements caused by beechnut availability.

Although beech trees are ubiquitous within the state, during years when beechnut production is high bears tend to feed on them in remote, often high elevation areas. As a result, bears are harvested in lower numbers by bow hunters and hunters using hounds since they tend to hunt (or initiate the hunt, in the case of hunters with dogs) closer to roads, agricultural fields and apple orchards. Two other factors influencing the lower harvest in September and October were fewer bears feeding in farmers’ feed corn and road closures following Tropical Storm Irene that made extensive areas of bear habitat difficult to access.

Heaviest Bears

A total of 15 bears weighing more than 300 pounds (scaled/dressed weight) were taken during the 2011 season. No bears exceeding 400 pounds were harvested, and all bears over 300 pounds were males. The heaviest weighed 385 pounds, taken in the town of Eden. The majority of large bears were recorded from WMUs D2 and E. Several other large bears were reported that were not fully field dressed when brought to the check station for weighing and so are not reflected in this report. Only two of the 15 heaviest bears were taken using dogs (Table 3) compared to eight harvested in 2010. The average weight of all bears harvested in the 2011 was 151 pounds, up significantly from the average weight of 139 and 138 pounds in 2010 and 2009, respectively.

TABLE 3. HEAVIEST BEARS HARVESTED IN 2011

Town Harvested	WMU	Weight	Date of Kill	Sex	Target Species	Using Dogs
Eden	D1	385	11/13/2011	Male	Deer	No
Concord	E	375	11/16/2011	Male	Deer	No
East Haven	D2	363	11/13/2011	Male	Deer	No
Craftsbury	D1	355	9/24/2011	Male	Bear	Yes
Readsboro	P	350	11/12/2011	Male	Deer	No
Westmore	D2	347	11/5/2011	Male	Deer	No
Lewis	E	342	11/14/2011	Male	Deer	No
Stratton	P	336	11/14/2011	Male	Deer	No
Morgan	D2	330	11/6/2011	Male	Deer	No
Winhall	P	325	10/10/2011	Male	Bear	No
Starksboro	F2	320	9/19/2011	Male	Bear	No
Stockbridge	M1	310	9/4/2011	Male	Deer	No
Guildhall	E	307	9/4/2011	Male	Bear	Yes
Newbury	J2	300	11/12/2011	Male	Deer	No
Duxbury	G	300	11/13/2011	Male	Deer	No

Non-hunting Mortalities and Damage Complaints

In addition to the 396 bears taken legally during the regulated hunting season, there were 60 reported as non-hunting (or incidental) mortalities during 2011. Of the bears not taken by hunters, 43 were killed in motor vehicle collisions and seven were dispatched as result of bear-human conflicts (Table 4). In addition, department law enforcement personnel received 119 property damage complaints. In all, wardens responded to 179 call-outs regarding non-hunting mortality and bear damage complaints.

The recent increase in Vermont's black bear population and an expanding human population that is encroaching into black bear range increase the likelihood of bear-human encounters and, consequently, also increases the number of these encounters resulting in conflict. We recognize that conflicts with bears need to be addressed with sensitivity toward loss of personal property and human safety and towards the bear population. We produced a "Protocol for Handling Black Bear-Human Conflicts" in 2011 intended to help provide this sensitivity in bear management as well as to increase the bear program's efficiency and consistency.

TABLE 4. 2011 NON-HUNTING MORTALITIES AND DAMAGE COMPLAINTS

Mortality Type	Number
Vehicle Collision	43
Management/Damage	7
Illegal	0
Other or Unknown Cause	10
Total	60
Bear Damage Complaints	119

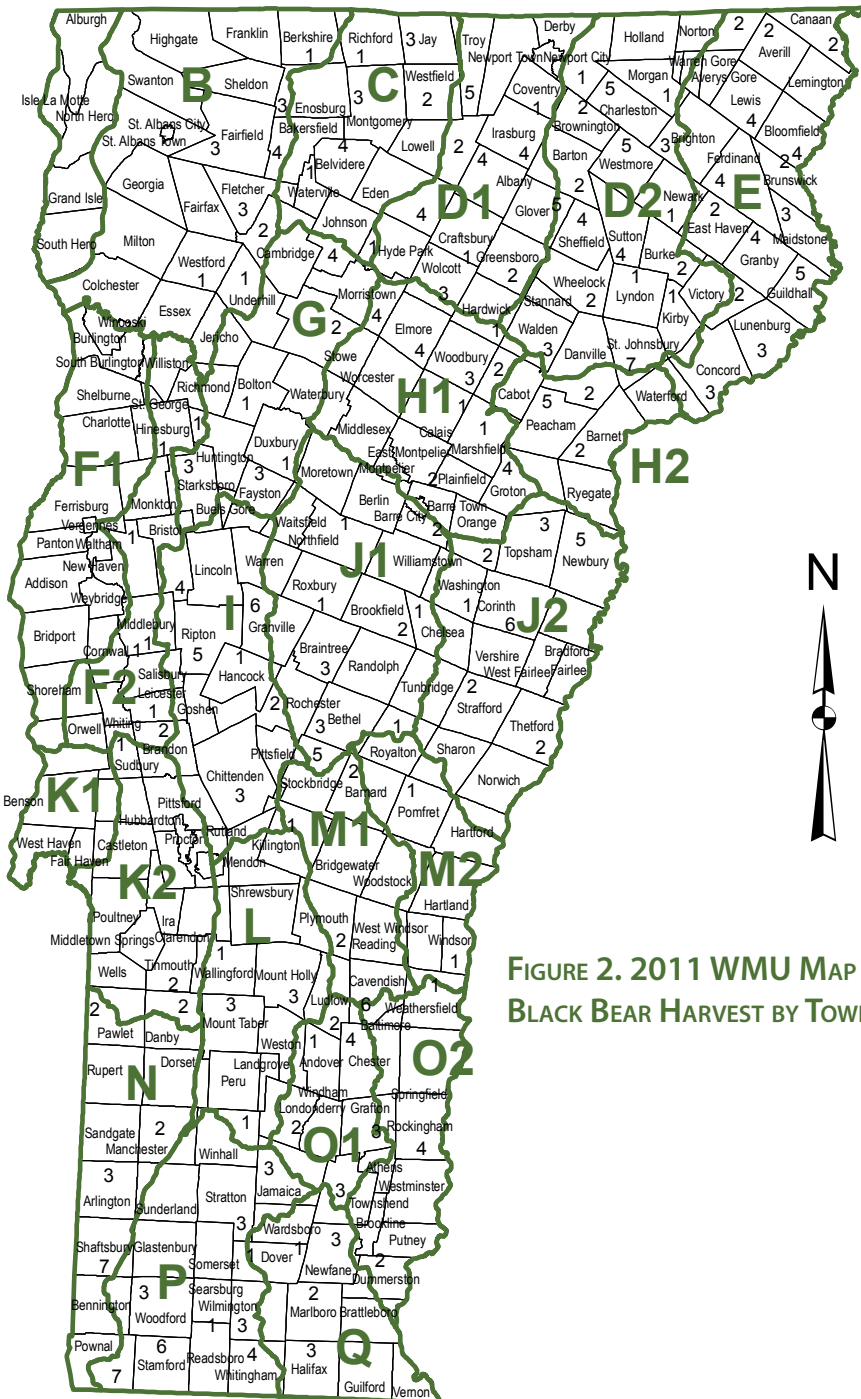


FIGURE 2. 2011 WMU MAP OF BLACK BEAR HARVEST BY TOWN

Looking To The Future

Vermont's bear population is estimated to be at or above the upper limit of the Big Game Management Plan population objective of 4,500 to 6,000 bears. To address this and other management issues identified in the Plan, in 2012 we will evaluate black bear management strategies and hunting season structures to increase the annual harvest of bears to stabilize population growth. Two changes considered are to extend the season length by four days at the end of the season, and to possibly create a separate bear license for the purpose of gaining better information on hunter numbers, hunter effort and success rates. These changes may become effective in 2013 if they are authorized by the Fish and Wildlife Board.

TABLE 5. 2011 VERMONT BLACK BEAR HARVEST BY TOWN OF KILL

COUNTY	Town	Total Harvested	Female	Males	Unknown
ADDISON	Bristol	4	3	1	
	Granville	6	3	3	
	Hancock	1	1		
	Leicester	1	1		
	Middlebury	1	1		
	New Haven	1		1	
	Ripton	5	2	2	1
	Salisbury	1		1	
	Starksboro	3		3	
	Total		23	11	11
BENNINGTON	Arlington	3	3		
	Manchester	2		2	
	Pownal	7	2	5	
	Readsboro	6	1	5	
	Rupert	2	1	1	
	Searsburg	1	1		
	Shaftsbury	7	2	5	
	Stamford	6	1	5	
	Sunderland	1		1	
	Winhall	1		1	
	Woodford	3	2	1	
Total		39	13	26	0
CALEDONIA	Barnet	2		2	
	Burke	2	2		
	Danville	2	2		
	Groton	4		4	
	Hardwick	1		1	
	Kirby	1	1		
	Lyndon	1	1		
	Newark	1	1		
	Peacham	5	4	1	
	Ryegate	1		1	
	Sheffield	4	2	1	1
	St Johnsbury	7	4	3	
	Sutton	4	3	1	
	Walden	4	2	2	
Wheelock	2		2		
Total		41	22	18	1
CHITTENDEN	Bolton	3	2	1	
	Hinesburg	1		1	
	Huntington	1	1		
	Richmond	1		1	

TABLE 5. 2011 VERMONT BLACK BEAR HARVEST BY TOWN OF KILL

COUNTY	Town	Total Harvested	Female	Males	Unknown
CHITTENDEN (cont.)	Underhill	1		1	
	Westford	2	1	1	
	Total	9	4	5	0
ESSEX	Averill	2		2	
	Bloomfield	4	1	3	
	Brighton	3		3	
	Brunswick	2		2	
	Canaan	2		1	1
	Concord	3	2	1	
	E Haven	2	1	1	
	Ferdinand	4	2	2	
	Granby	4	3	1	
	Guildhall	5	1	4	
	Lewis	4		4	
	Lunenburg	3	1	2	
	Maidstone	3		3	
	Norton	2	1	1	
	Victory	2		2	
	Total	45	12	32	1
FRANKLIN	Bakersfield	4	2	2	
	Berkshire	1	1		
	Enosburg	3	1	2	
	Fairfield	1		1	
	Fletcher	3		3	
	Montgomery	3	2	1	
	Richford	1		1	
	Total	16	6	10	0
LAMOILLE	Belvidere	3	2	1	
	Cambridge	2	1	1	
	Eden	4	2	2	
	Elmore	4	2	2	
	Hyde Park	1	1		
	Johnson	4	1	3	
	Morristown	4	1	3	
	Stowe	2	1	1	
	Waterville	1	1		
	Wolcott	3	2	1	
	Total	28	14	14	0
ORANGE	Braintree	3	1	2	
	Brookfield	2		2	
	Chelsea	1			1

TABLE 5. 2011 VERMONT BLACK BEAR HARVEST BY TOWN OF KILL

COUNTY	Town	Total Harvested	Female	Males	Unknown
ORANGE (cont.)	Corinth	6	2	4	
	Newbury	5	1	4	
	Orange	2	1	1	
	Strafford	2	1	1	
	Thetford	4		4	
	Topsham	3	2	1	
	Vershire	3	3		
	Washington	1		1	
	Total		32	11	20
ORLEANS	Albany	4	2	2	
	Barton	2	1	1	
	Brownington	2	1	1	
	Charleston	5	1	4	
	Coventry	1		1	
	Craftsbury	2	1	1	
	Derby	1	1		
	Glover	5	3	2	
	Greensboro	2	1	1	
	Holland	1			1
	Irasburg	4	3	1	
	Jay	3	3		
	Lowell	2	2		
	Morgan	1		1	
	Troy	5	3	2	
	Westfield	2		2	
	Westmore	5	3	2	
	Total		47	25	21
RUTLAND	Brandon	2		2	
	Chittenden	3		3	
	Danby	2		2	
	Killington	1		1	
	Mt Holly	3	1	2	
	Mt Tabor	3		3	
	Pawlet	2	1	1	
	Sudbury	1		1	
	Tinmouth	2	1	1	
	Wallingford	1			1
	Total		20	3	16
WASHINGTON	Barre	2	1	1	
	Cabot	2	1	1	
	Calais	1	1		
	Duxbury	1		1	

TABLE 5. 2011 VERMONT BLACK BEAR HARVEST BY TOWN OF KILL

COUNTY	Town	Total Harvested	Female	Males	Unknown
WASHINGTON (cont.)	Fayston	3	3		
	Marshfield	1		1	
	Northfield	1	1		
	Plainfield	2		2	
	Roxbury	1		1	
	Warren	1		1	
	Woodbury	3	2	1	
	Worcester	2		2	
	Total	20	9	11	0
WINDHAM	Dover	1	1		
	Dummerston	2		2	
	Grafton	3	1	2	
	Guilford	2	1	1	
	Halifax	3	1	2	
	Jamaica	3		3	
	Marlboro	2		2	
	Newfane	3		3	
	Putney	1	1		
	Rockingham	4	4		
	Stratton	3		3	
	Townshend	3	2	1	
	Wardsboro	1		1	
	Whitingham	4	2	2	
	Wilmington	3	1	2	
	Windham	2	1	1	
Total	40	15	25	0	
WINDSOR	Andover	1	1		
	Barnard	2	2		
	Bethel	3	2	1	
	Bridgewater	5	3	2	
	Cavendish	6	4	2	
	Chester	4	2	2	
	Ludlow	2	1	1	
	Plymouth	2	1	1	
	Pomfret	1		1	
	Rochester	2	1	1	
	Royalton	1		1	
	Stockbridge	5	3	2	
	Weathersfield	1		1	
	Windsor	1		1	
	Total	36	20	16	0
Statewide Total		396	165	225	6