

## 2007 Rabies Summary, Massachusetts Department of Public Health

The following report summarizes data collected on animal specimens sent to the State Laboratory Institute for rabies testing from January to December 2007. Cumulative reports summarizing rabies testing from 1992-2002 and annual reports from 2003 to 2006 are available on the MDPH website at [www.mass.gov/dph/cdc/epii/rabies/rabies.htm](http://www.mass.gov/dph/cdc/epii/rabies/rabies.htm).

### **Number of Submissions and Positive Results by Year**

As **Table 1** shows, in 2007 there were fewer animals testing positive than in each of the previous 2 years. This decline, in part, reflects a reduction in animals submitted from Cape Cod. Decreased animal populations and a more educated population on the topic of rabies likely contributed to this decline.

<b>Table 1. Number of Submissions, Positive Results, and Percent Positive by Year</b>			
<b>Year</b>	<b>Number Submitted</b>	<b>Number Positive</b>	<b>% Positive</b>
1992	1079	57	5%
1993	3971	720	18%
1994	4532	735	16%
1995	3438	400	12%
1996	3005	115	4%
1997	3128	282	9%
1998	3938	498	13%
1999	3270	226	7%
2000	3310	276	8%
2001	3346	280	8%
2002	3137	304	10%
2003	2983	216	7%
2004	3479	327	9%
2005	3388	329	10%
2006	2910	232	8%
2007	2802	152	5%
<b>Total</b>	<b>51,716</b>	<b>5,149</b>	<b>10%</b>

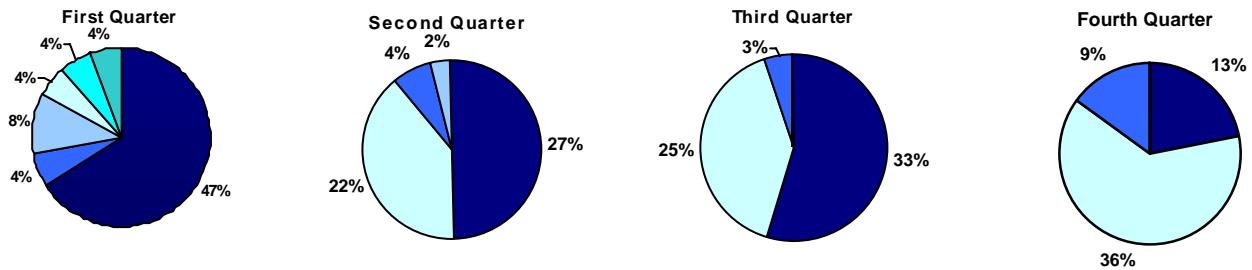
### **Number of Submissions and Positive Results by Species**

In 2007, 2,802 specimens were submitted to the State Laboratory Institute (SLI) for rabies testing. Of these specimens, 152 tested positive for rabies. **Table 2** illustrates positive animals in 2007 by species. Raccoons and skunks remain at the top of the charts accounting for 51% of all positive animals. Enhanced surveillance of raccoons continued on Cape Cod throughout 2007. However, the rabies virus has significantly diminished the raccoon and skunk populations on Cape Cod leading to fewer submissions overall in 2007.

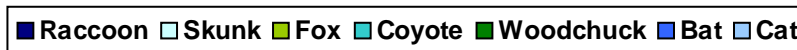
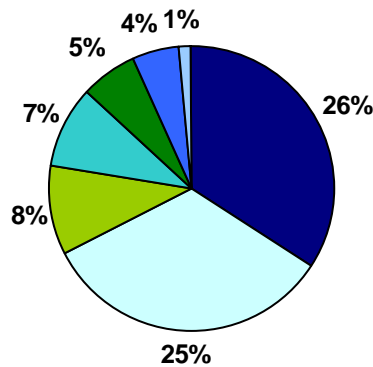
**Table 2. Number of Submissions, Positive Results, and Percent Positive by Species (sorted from highest to lowest by # of positive results), 2007**

Animal	Number Positive/Submitted (%) 1st Quarter	Number Positive/Submitted (%) 2nd Quarter	Number Positive/Submitted (%) 3rd Quarter	Number Positive/Submitted (%) 4th Quarter	Total number positive/submitted Full Year 2007
Raccoon	17/36 (47%)	30/111 (27%)	15/46 (33%)	10/79 (12.6%)	71/272 (26.1%)
Skunk	1/12 (8%)	6/27 (22%)	23/92 (25%)	8/22 (36%)	38/153 (24.8%)
Bat	4/74 (5%)	8/203 (4%)	14/479 (3%)	3/35 (8.5%)	29/791 (3.8%)
Cat	2/190 (1%)	4/222 (2%)	0/309	0/180	6/901 (<1%)
Coyote	1/3 (33%)	0/3	0/4	0/4	1/14 (7.1%)
Dog	1/99 (1%)	0/85	0/131	0/88	1/403 (<1%)
Woodchuck	0/4	2/17 (12%)	0/17	0/2	2/40 (5%)
Other	0/39	3/74 (4%)	1/82 (1%)	0/33	4/228 (2.6%)
<b>TOTAL</b>	<b>26/457 (6%)</b>	<b>53/742 (7%)</b>	<b>53/1160 (5%)</b>	<b>21/443 (4.7%)</b>	<b>152/2802 (5.4%)</b>

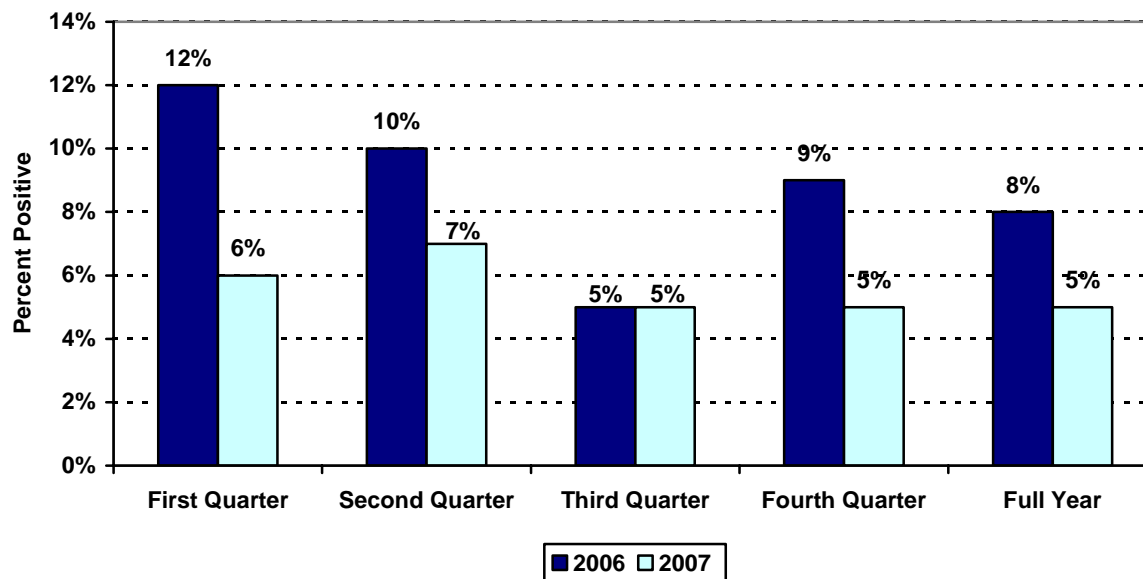
**Proportion of Total Rabies Positives by Animal Species, by Quarter**



**Proportion of Positive, 2007**



Proportion of Total Positives by Quarter, by Year



**Cumulative Submissions and Positive Results by Month**

Due to the seasonal nature of wild animal activity, changes in animal submission numbers fluctuate fairly predictably throughout the year. In general, higher numbers of animals are submitted during the summer with the lowest numbers of submissions during the winter. **Table 3** shows the highest numbers of submissions occurred during June, July and August. The lowest numbers of submissions occurred in the winter months.

Month	Submitted, 2006	Positive, 2006		Submitted, 2007	Positive, 2007	
January	159	18	(11%)	144	6	(4%)
February	145	8	(6%)	144	6	(4%)
March	194	33	(17%)	169	14	(8%)
April	213	35	(16%)	148	--	
May	235	22	(9%)	249	9	(4%)
June	317	16	(5%)	345	44	(13%)
July	328	14	(4%)	400	14	(4%)
August	573	25	(4%)	504	18	(4%)
September	252	18	(7%)	256	21	(8%)
October	165	15	(9%)	170	7	(4%)
November	196	15	(8%)	130	7	(5%)
December	132	13	(10%)	143	7	(5%)
<b>Total</b>	<b>2553</b>	<b>232</b>	<b>(8%)</b>	<b>2802</b>	<b>152</b>	<b>(5%)</b>

### Submissions and Positive Results by County

In 2007, each of the 14 counties in Massachusetts submitted at least one animal for rabies testing, and all counties, except Nantucket and Dukes, had at least one positive animal (See **Table 4** below). Middlesex County submitted the highest number of animals (n = 577), while Worcester County had the highest number of animals test positive (n = 36) and Berkshire County had the highest proportion of submitted animals testing positive (16%).

County	Positive/Submitted Animals (%) 1 <sup>st</sup> Quarter		Positive/Submitted Animals (%) 2 <sup>nd</sup> Quarter		Positive/Submitted Animals (%) 3 <sup>rd</sup> Quarter		Positive/Submitted Animals (%) 4 <sup>th</sup> Quarter		Total Positive/Submitted Animals (%)
Barnstable	2/35	(6%)	1/46	(2%)	1/91	(1%)	1/77	(1%)	5/249 (4%)
Berkshire	2/9	(22%)	3/13	(23%)	3/32	(9%)	2/9	(22%)	10/63 (16%)
Bristol	1/30	(3%)	4/47	(9%)	2/84	(2%)	1/40	(3%)	8/201 (4%)
Dukes	0/0		0/1		0/4		0/1		0/6
Essex	4/58	(7%)	2/81	(2%)	9/120	(8%)	4/46	(9%)	19/305 (6%)
Franklin	0/14		1/11	(9%)	0/27		0/3		1/55 (2%)
Hampden	1/29	(3%)	3/40	(8%)	3/54	(6%)	2/16	(13%)	9/139 (6%)
Hampshire	2/12	(17%)	1/10	(10%)	1/16	(6%)	0/6		4/44 (9%)
Middlesex	3/106	(3%)	8/151	(5%)	11/244	(5%)	3/76	(4%)	25/577 (4%)
Nantucket	0/0		0/1		0/0		0/1		0/2
Norfolk	4/49	(8%)	4/92	(4%)	6/154	(4%)	2/35	(6%)	16/330 (5%)
Plymouth	1/37	(3%)	5/65	(8%)	6/88	(3%)	3/40	(8%)	12/230 (5%)
Suffolk	1/33	(3%)	4/82	(5%)	1/77	(1%)	1/39	(3%)	7/231 (3%)
Worcester	4/49	(10%)	17/100	(17%)	13/159	(8%)	2/45	(4%)	36/344 (10%)

Number of Submissions by County, 2007

