

The Rabies Reporter

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The Rabies Reporter, a scientific newsletter about current issues in rabies research and control, is a joint effort of the Rabies Research Unit of the Ontario Ministry of Natural Resources; the Rabies Laboratory at the Animal Diseases Research Institute of the Canadian Food Inspection Agency; the Ontario Ministry of Health; and the Geographic Information Systems Laboratory at Queens University, Kingston. Articles for future issues will be welcomed by the editor. The Rabies Reporter is not refereed, and should not be cited in papers intended for refereed journals. Send contributions, letters and inquiries to:

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RABIES IN ONTARIO IN THE SECOND QUARTER

Currently, there are four separate rabies outbreaks in progress in Ontario. In the recent quarter, two stayed about the same as last year, one decline compared to last year, and the last has declined within this year.

There were four new cases of raccoon strain rabies, all in raccoons, during April-June, with the last one reported near Elgin on 20 June. The other 3 were 1 near Delta, and 2 near Athens. All of these are within areas treated intensively during the 2001 Point Infection Control operations. Interestingly, we are still seeing cases there, despite both PIC and high density baiting last year. Perhaps these animals were very long incubators, but that is only one possible explanation, and there is no evidence to allow us to choose objectively between the possibilities. It is now very clear that there is a lot less raccoon rabies than there was during the same months a year ago – 4 cases vs. 19. Unfortunately, the fat lady has to hold the song of triumph.

The arctic fox strain persistence, driven by skunks, is distressingly the same as it has been for the last several years. The graphs show cases for the second quarter, and for the April-June period, for each year 1992 – 2002, for the Western Region. Bait drops began in the area 1n 1994, which is year 3 on the graphs. There was one surprise for me on this graph – the numbers of rabid skunks have remained in a narrow range for the last ten years, while, the number of rabid foxes dropped off quickly after oral vaccination began. The number of cases appears a bit higher this year, but overall numbers are so small I doubt that this is a real trend.

The third rabies situation exists in the Sudbury area. Fox strain rabies has declined dramatically in the past two months. The outbreak became serious in February, when there were 14 cases. That was followed by 11 in March and 17 in April, but then only 3 in May, none in June, and 2 in July. One of the latter cases was near

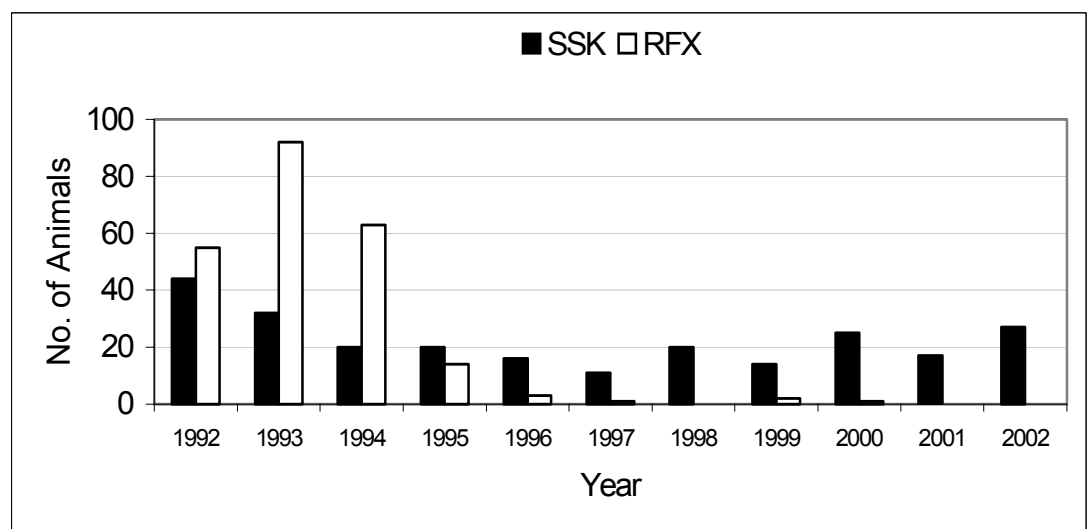


Figure 1. Rabid foxes and skunks in Ontario from 1992 to 2002. The black (left) bars represent the number of rabid skunks in Ontario. The white (right) bars represent the number of rabid foxes in Ontario.

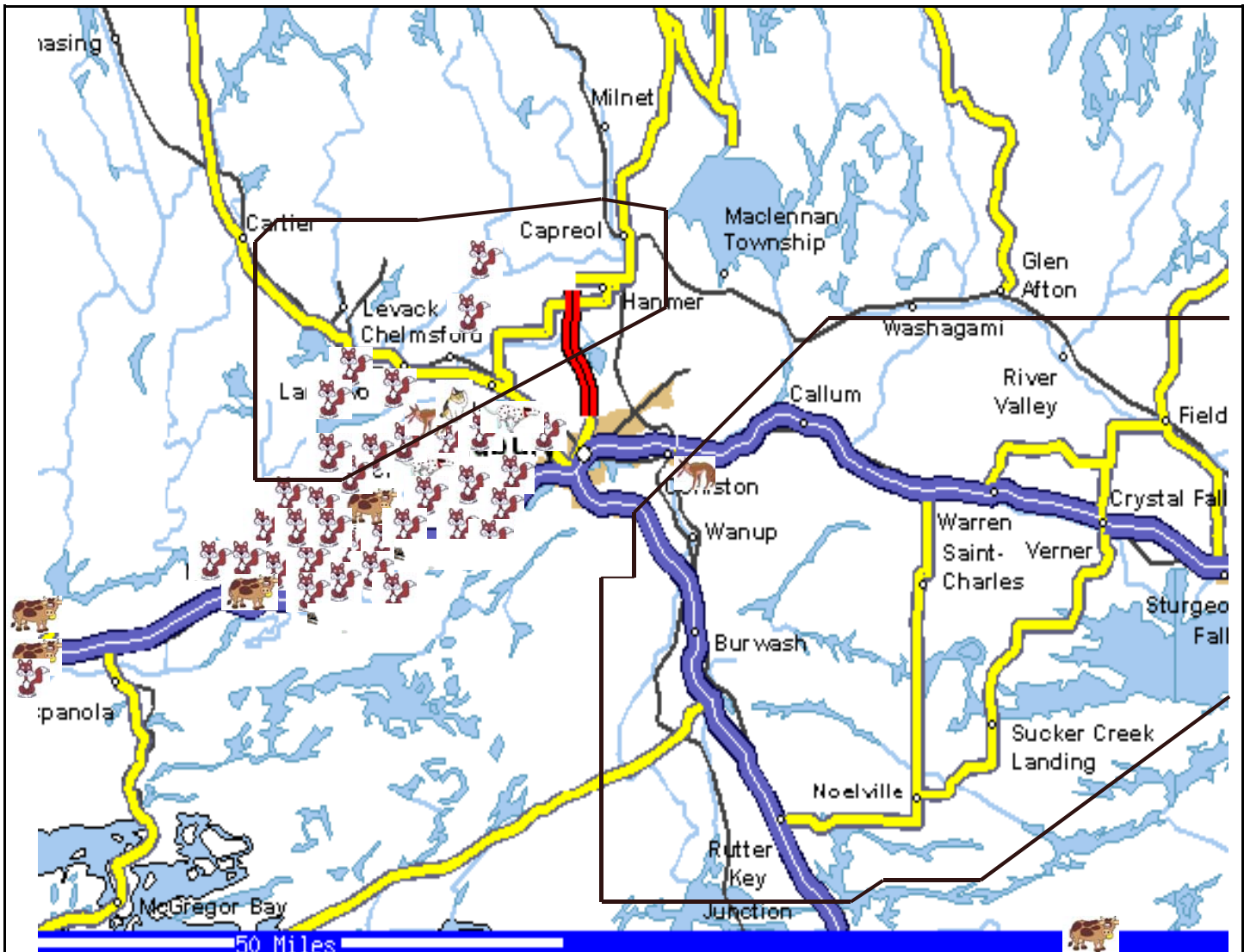


Figure 2. Rabies cases in the Sudbury area in 2002. The outlined area represents the area baited in September 2001. Each animal symbol represents one confirmed rabid animal of that species. [Map courtesy of Ed Wierzbicki, Sudbury and District Health Unit,]

Sturgeon Falls, which is on the eastern edge of last year's map. If you wish to get the very latest information, visit <http://www.sdhu.ca/>. Under rabies, there is a list of all cases, updated as they are confirmed. Ed Wierzbicki prepared a PowerPoint presentation of the sequence of cases in the area.

One feature appears dramatic: most of the 2002 cases occurred in a zone which lies between the two areas baited last year. We did not bait within the city of Sudbury last year,

on grounds that there had been almost no cases there in 2001. One guess, now clearly wrong, was that there were not many foxes in the city area. There is a lot of natural space within the city, but when you drive around, most of it looks like bare rock with a few birches and poplars hanging on in the cracks. It is tempting to conclude from the map that the bait drop had a dramatic effect. However, an alternate explanation is that this was just the natural progression of rabies. Northern rabies outbreaks in the past

have been short and sharp. This one seems to follow that pattern.

The fourth rabies picture in Ontario rabies is bats. The table indicates a picture very similar to last year. Remember though, that the July-August-September period usually produces the peak in rabid bats.

*Charlie MacInnes
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THE APPALACHIAN RIDGE PROJECT

There was a media event at the Allegheny County airport on 15 August, marking the kickoff of the Appalachian Ridge bait zone. That zone will cover parts of western New York and Pennsylvania, eastern Ohio, and a barrier strip extending through West Virginia into Virginia and Tennessee. The purpose of the project is to block raccoon rabies from moving in to the midwestern states, and ultimately to roll it back east of the mountain ridge. Approximately 4 million baits will be dropped in August and early September 2002.

We, in Ontario, are very pleased to see this under way. In 1994, we made the strategic decision to fight raccoon rabies before it entered the province. There were several reasons. First, it would be cheaper to fight it across the border because Lakes Ontario and Erie make up so much of our border. Second, we firmly believed that raccoon rabies could be completely eliminated by oral vaccination. However, to accomplish that would require participation of every state and province affected. The Appalachian Ridge project includes our friends in USDA-APHIS-Wildlife Services, plus active participation from six states. That represents a mighty leap forward in the right policy direction. Dennis Slate of Wildlife Services has been a key worker in raising the budget for this ambitious project. Andy Montoney, WS state director for Ohio, will be the leader in the field, ably assisted by Bob Hale, who recently transferred to Wildlife Services from the Ohio Department of Health. There will be several useful research initiatives associated with this large bait zone.

The Rabies Unit believed in 1994 that oral vaccination would

work, but most jurisdictions in the USA were still skeptical. Ontario's participation has been very important. First Ontario, then Quebec, contributed money to baiting efforts in New York and Vermont. That fact was used to support the Wildlife Services' applications for significant funding to attack the whole of raccoon rabies. Our activity helped get the funding for the Appalachian Ridge.

We also commend our good friends Don Lein and Laura Bigler of Cornell University for their leadership and initiatives which led to baits being dropped in New York, Vermont, and, in 2002, New Hampshire. This represents another piece of the big picture. In addition, they led the development of a northeast plan for rabies control, which promises to get coordination built up to the level represented by the Appalachian Ridge project.

At the request of the Texas Department of Health, Ontario aircraft helped from 1995 to 2001, with the successful programs to roll coyote rabies back to the Mexican border, and to shrink the area covered by gray fox rabies. Those projects were also key in helping state authorities throughout the USA realize that control of rabies spread by terrestrial wildlife was a workable idea.

There is a lot more in the works, now. Florida is likely to embark on a major bait project during the coming winter, and a barrier from the gulf coast northward to meet the Appalachian Ridge project is being planned.

Ontario played a key role in all of this because we had a head start. The arctic fox strain of rabies gave southern Ontario more rabies cases than any other state or province from 1958 to 1992, except for 3 years in the early 1960s. The air-drop technology we developed to counter that has been

the cornerstone of all the USA programs and we have been pleased to share it. As efforts in the USA gain momentum, our role will become smaller, but we can proudly say we helped get the idea rolling.

Charlie MacInnes
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BAITING IN NEW YORK AND THE NORTH EAST

In 2002, the northern New York bait zone will extend south to the southeastern shore of Lake Ontario, and extend east across the Tug Hill plateau to the edge of the Adirondack high country. If we can clear raccoon rabies from Jefferson and St. Lawrence counties along the St. Lawrence, that band across the Tug Hill will be a major protection against further invasion of eastern Ontario.

To the east, Quebec has decided that baits are no longer needed in the province, so they have contributed to help extend the bait zone in Vermont further south. There have been very few rabid animals in the zone baited in 2000 and 2001. The zone will be extended this year to include the upper reaches of the Connecticut River Valley in New Hampshire.

In the west, additional funding will allow extension of baiting south from Niagara County into most of Erie County. In the far west of the state, the Chautauqua County bait zone will cover the whole county, and will be the northeast corner of the Appalachian Ridge project.

We expect to drop about 400,000 baits in Vermont and New Hampshire, and 1.325 million in New York. It will be a busy season!!

Proposals were requested to es-

establish a bait zone straddling the border between New Brunswick and Maine. That will not happen in 2002. The good news, though, is that there has been a sharp decrease in the number of rabies cases in New Brunswick, still holding at 3 for the year. Surveillance has been increased on the Maine side, but has not turned up many rabies cases. All seems quiet on the northeastern front!

Charlie MacInnes
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PLANS FOR BAITING IN ONTARIO IN 2002

The Ontario aerial bait drop programs will both kick off and close down the baiting season for the summer and fall of 2002.

In mid-August, one plane will be available to begin the raccoon portion of the baiting in eastern Ontario. It will be joined by a second aircraft approximately one week later. Both aircraft will work out of the Brockville airport. Approximately 600,000 baits will be distributed throughout the re-

gion of eastern Ontario indicated in Figure 3.

An experimental comparison of Ontario slim baits and coated sachet baits will be conducted in the Brockville area.

After completion of baiting in the Appalachian Ridge project and the northeastern USA, all three aircraft will return to Ontario to commence the fox portion of the baiting program. This should begin in mid-September from the Stratford airport.

Approximately 400,000 baits will be distributed in southwestern Ontario. The central Ontario area will be baited from the Peterborough airport where approximately 150,000 baits will be distributed throughout the area. From there, the planes will head to northern Ontario to bait the areas around Sudbury and Kirkland Lake. The green spaces within Sudbury will also be baited due to the incidence of rabies within urban areas. Smaller green spaces will be baited by hand and larger green spaces will be baited using helicopters. Approximately 170,000 baits will be distributed in northern Ontario. The Sudbury airport will be used as the base for operations.

By the end of September, a very tired Rabies Unit hopes to head back to the office to prepare for the next season of baiting.

A more detailed description of the baiting operations will be available in the next issue.

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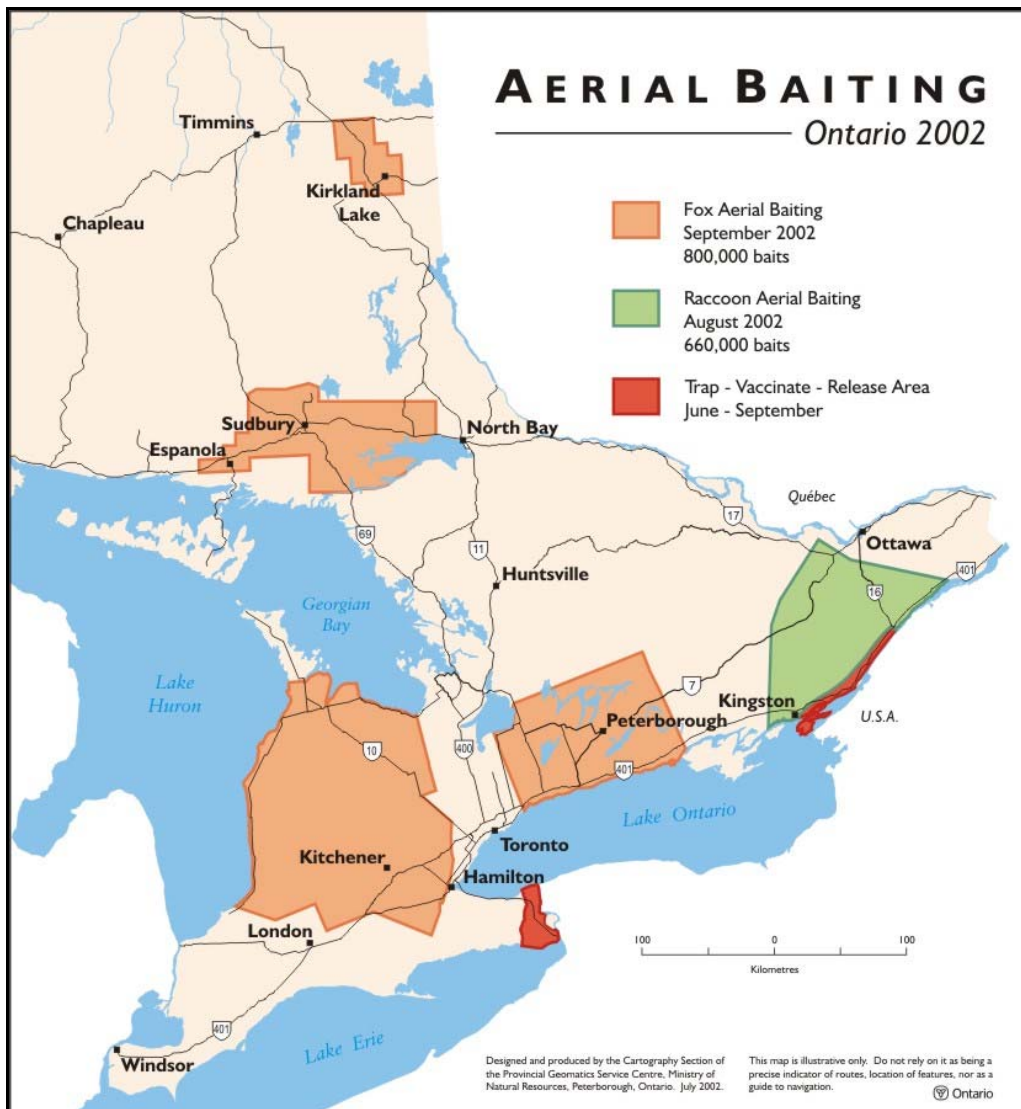


Figure 3. Rabies control areas in Ontario.

PROVINCE EXPANDS FIGHT AGAINST RABIES IN EASTERN ONTARIO

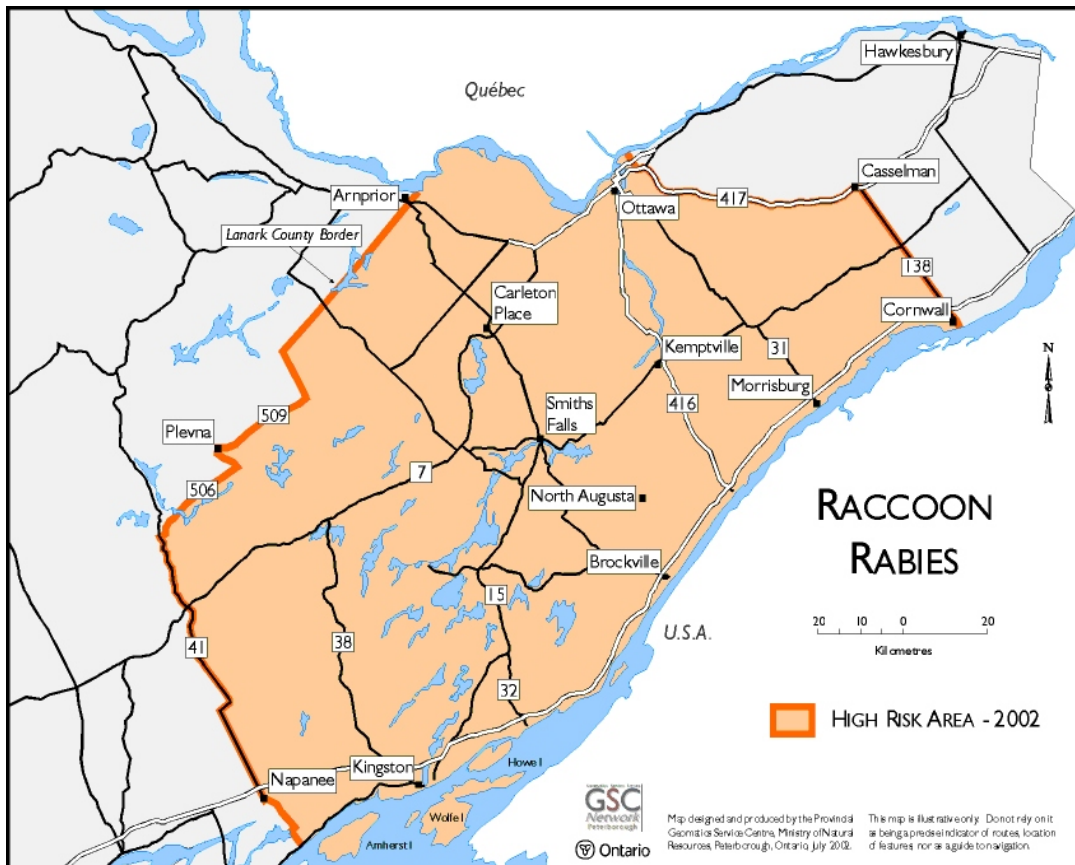


Figure 4. Expanded high risk area in eastern Ontario.

In its ongoing efforts to control raccoon rabies and protect the public, Natural Resources Minister Jerry Ouellette announced the expansion of the province's high-risk area in eastern Ontario.

There have been 101 confirmed cases since raccoon rabies was first found in eastern Ontario in 1999. During the first six months of 2001, there were 29 confirmed cases of raccoon rabies in the high-risk area. This year, as of August 31, there have only been six confirmed cases, which is about an 80-per-cent drop. Recent cases near the northern and eastern border of the old high-risk area have prompted the expansion of the area to the north and east. The

new high-risk area includes the city of Ottawa.

"We can't take the risk of rabies spreading from one area to another," said Ouellette. "Expanding the high-risk area is the best way to stop that from happening."

There will be no relocation of raccoon rabies carrier species (raccoons, skunks and foxes) in the high-risk area. Outside the high-risk area, all raccoon rabies carrier species that have been live-trapped or acquired in other ways must be released no further than one kilometre from the point of capture (although not on private property without the landowner's permission) and within 24 hours. This applies to all other areas

of the province not in the high-risk area.

"Protecting public health and safety is the ultimate goal in controlling the spread of raccoon rabies," said City of Ottawa's Medical Officer of Health, Dr. Robert Cushman. The Ministry of Natural Resources is working with local Health Units, Canadian Food Inspection Agency, the public and municipalities to increase public awareness of rabies.

The new boundaries of the high-risk area (starting in the east) are west of highway 138 at Cornwall; south of highway 417; the Ottawa River to Arnprior; the Lanark County border to highway 506 to just south of Cloyne; and east of highway 41 (just west of Kingston).

The previous boundaries for the high-risk area were west of highway 31 at Morrisburg; south of highway 7 and 6; and east of highway 41 at Napanee.

[Source: News release issued by Ministry of Natural Resources on July 23, 2002]

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Animal Rabies Report: April to June 2002

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Animal Type	Fox			Raccoon			Skunk			Other Wildlife			Bat			Dog			Cat			Livestock			Totals		
County or Region	#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative		#	Cumulative	
		02	01		02	01		02	01		02	01		02	01		02	01		02	01		02	01		02	01
Northern																											
Muskoka																								0	0	0	
Parry Sound																								0	0	0	
Nipissing		1	2													1							1	0	1	4	
Sudbury	12	32	11	2	2				1	1	2					1	2					1	3		17	41	12
Cochrane		1	2									2						1						3	0	1	8
Timiskaming	3	3										1										1	1		4	4	1
Algoma																						1	1		1	1	0
Thunder Bay																									0	0	0
Rainy River																									0	0	0
Kenora																									0	0	0
Regional Totals																											
Eastern				4	9	28			2				2	3	9										6	12	39
Central									3				4	5	2										4	5	5
Western							12	27	17				2	2					2				1	8	14	32	25
Southern													1	1	2										1	1	2
Northern	15	37	15	2	2				1	1	2	3				1	2	2				3	5	4	22	48	25
TOTALS	15	37	15	6	11	28	12	27	23	1	2	3	9	11	13	1	2	2	0	2	0	3	6	12	47	98	96

Notes for this quarter:

All bats were big brown bats.

Livestock included 1 horse from Algoma, 1 cow in Timiskaming, and 1 cow in Sudbury.

The other wildlife was a coyote in Sudbury.

Two raccoons in Sudbury both had arctic fox strain of rabies. Only 6 of the raccoons in Leeds-Grenville were from 2002. The other 3 were diagnosed in 2002 but were collected in 2001.

