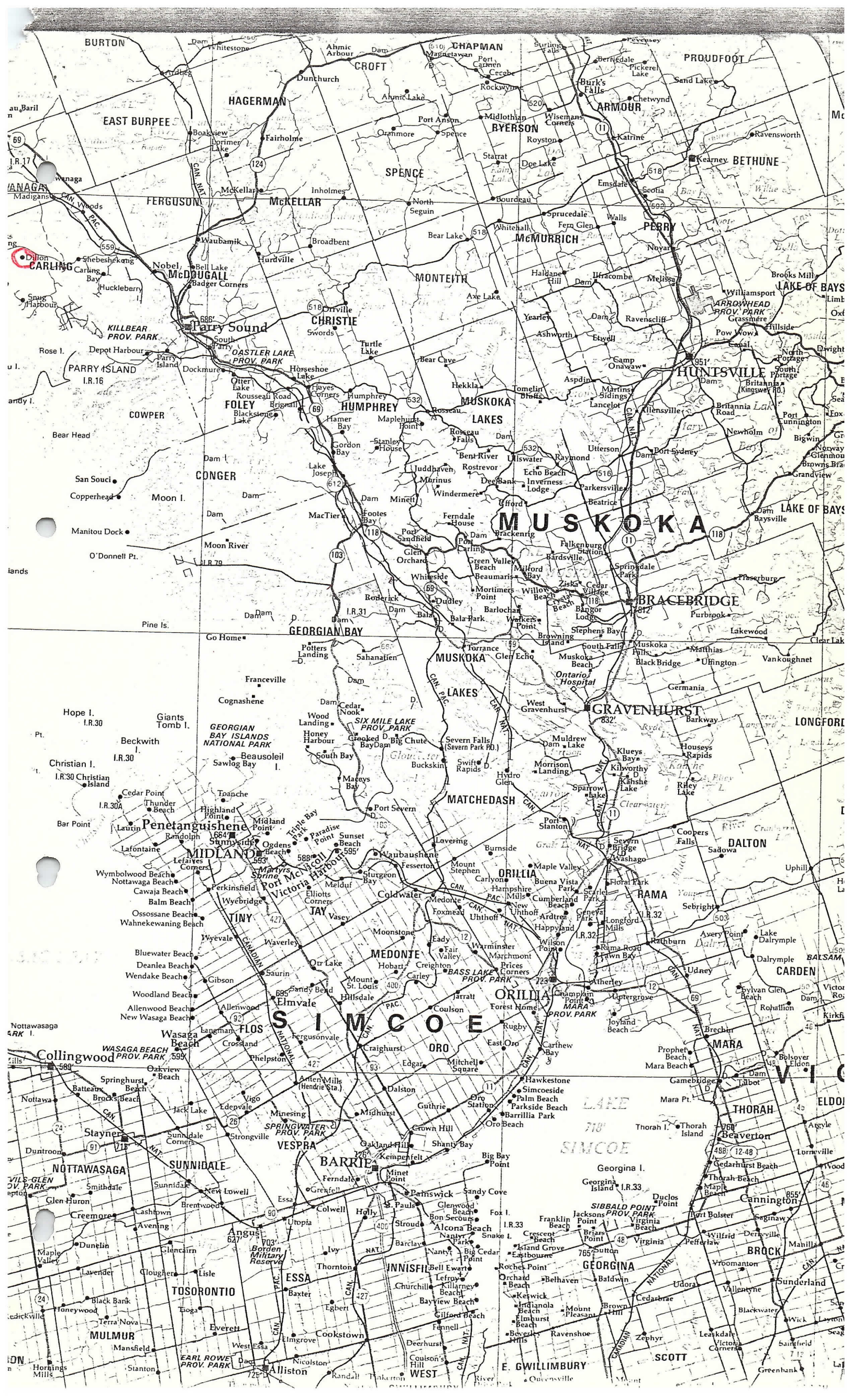


TORNADO PROJECT SUMMARY SHEET

F=0

ONT

1.	DATE AND TIME	TUE JUNE 27, 1978	0630 EST
2.	LOCATION OR PATH (attach map)	DILLON	0697815
3.	PATH LENGTH	<input type="checkbox"/> NOT KNOWN <input type="checkbox"/> <1mi; <input type="checkbox"/> 1-4mi; <input type="checkbox"/> 5-10mi; <input type="checkbox"/> 11-50mi; <input type="checkbox"/> LENGTH IF >50mi	
4.	PATH WIDTH	1/4 mile	5. TORNADO PART OF SQUALL LINE? <input type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN:
6.	ANY UNUSUAL COLORATION?	<input checked="" type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN	
7.	ANY UNUSUAL SOUND?	<input type="checkbox"/> YES; <input type="checkbox"/> NO; <input type="checkbox"/> UNKNOWN	
8.	IF ANSWER TO 6 OR 7 YES, ELABORATE; CLOUDS TINGED WITH YELLOW		
9.	LIST ANY ASSOCIATED PHENOMENA (Such as hail, vivid lightning heavy rain, no rain, etc.) HAIL UP TO GOLF BALL SIZE		
10.	TOTAL DAMAGE ESTIMATE \$	11. TOTAL DEATHS	
12.	TOTAL INJURED	13. TOTAL HOMELESS	
14.	LIST ALL REFERENCES THE NORTH STAR, PARRY SOUND. THUR JUNE 29, 1978 p1 Telephone Interview. July 1978 by M. J. Newark		
15.	SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS. (a) none. (b) Many trees uprooted, some up to 2ft in diameter. Secondary damage to hydro wires and cottages due to falling trees.		



REPORT ON THE TORNADOES
OF TUESDAY JUNE 27TH, 1978

Prepared by

M.J. Newark and P.J. Elms

July 10, 1978

INTRODUCTION

(and possibly 3)

At least two tornadoes occurred in Ontario and Quebec on Tuesday June 27, 1978. This conclusion is the result of personal visits to storm damaged areas, interviews with the provincial police of Quebec and Ontario, Ontario Hydro and discussions with news reporters and private individuals. The storm tracks are shown in figures 1a and 1b.

1. Unconfirmed tornado at Dillon, Ontario (vicinity of Parry Sound)

A storm at 0730 EDT near Dillon, Ontario, displayed tornado characteristics but confirmation of a funnel sighting could not be obtained. Damage was confined to a path about 400 m in width and several kilometres in length. Trees, some up to 60 cm in diameter, were uprooted or broken off and minor damage to rooftops and TV masts was reported. Secondary damage was caused by trees falling onto houses and hydro wires. Hail of about 2 cm diameter accompanied the storm, while in Huntsville, hail as large as golf balls was reported. Windows along the storm path were broken and cars and trucks dented.

A total damage estimate is not available and there were no injuries or deaths. In response to questioning, there was no indication that anyone had heard the severe thunderstorm warning issued by the Ontario Weather Centre at 0500 EDT that morning.

turned a foggy grey colour as it drew water up about 10 or 12 metres. No rain or hail accompanied the tornado at this point. Only that portion of the track in the vicinity of Cascade was visited by the authors (figure 3).

The large uninhabited Parc de la Gatineau lies to the west of Cascade and the origin point of this tornado is unknown. Its total damage length is estimated to be about 50 kilometres at least, and in the area inspected was about 300 m wide. Trees, some as large as 1 m through the butt, were levelled in profusion and some had been snapped or twisted off. No primary property damage was seen in the vicinity and very little secondary damage. The description of the very bad damage and injuries in Masson is left to others, while considerable pictorial evidence of it has been published by the Ottawa daily papers.

The tornado reached Cascade around 1700 EDT and passed Masson at about 1730 EDT. This gives an average speed of about 70 km hr^{-1} .

Estimates of damage due to this tornado run as high as \$3 million, more than 30 people were injured and 50 or more families were left homeless.

2.2 Continuation of the tornado in the vicinity of Clarence Creek to St. Bernadin

The Ontario Hydro Commission has conducted a detailed study of the damage in the vicinity of St. Bernadin because a number of their large high-voltage transmission towers were felled by the storm at approximately 1800 EDT. Nobody reported a funnel cloud, but many barns

and silos were badly damaged along a narrow path. Hail the size of chicken eggs fell for a short time preceding the wind damage.

A damage estimate is unavailable. No injuries or deaths were reported.

3 THE STORMS AS SEEN BY WEATHER SATELLITE

GOES photographs received by the Satellite Data Lab., AES, indicate that the Quebec - eastern Ontario tornadoes were produced by the same parent thunderstorm complex which originated near Huntsville, Ontario at about noon EDT. Small at first, this complex moved across Algonquin Park, then growing in size curved east-southeastwards across Calumet Island. It crossed the Ottawa River near Rockland carried on across the western end of Montreal Island, finally moving into New Brunswick (figure 4). At the time that the tornadoes were occurring, the photographs show a multiple towered CB complex with a huge anvil cloud streaming downwind. This complex in turn was one of several others aligned northeast-southwest along a cold front. Calculations show that the motion of the particular complex was from 290° at 70 km hr^{-1} .

4 CONCLUSION *(and possibly 3)*

- (a) At least 2 *X* tornadoes struck Ontario and Quebec on Tuesday, June 27, 1978.
- (b) The most severe damage was at Masson, Quebec, where 30 or more people were injured, 50 or more families rendered homeless, and at least \$2 million worth of property damage was sustained.
- (c) Some people heard weather warning messages, but either could not or did not take precautionary measures.