
**Confirmed Tornado
Cambridge, Ontario
May 2, 1983**

Date-Local: Monday, May 2nd, 1983.

UTC: Monday, May 2nd, 1983.

Time-Local: 14:30

UTC: 18:30

Location: Cambridge

Region: Waterloo – Wellington

Classification: Confirmed Tornado

Category: A

Casualties: None

Track Length: 10.5km

Width: None Available

Motion: 225°

Damage Estimate: None available

F-Scale Rating: F2

Code: AH

Damage Survey: one

Spotter Reports: None

Other Documents:

Logged event citing a tornado as the event, but no tornadic damage given as evidence.

Preliminary report of May 2nd, 1983 storms in Southwestern Ontario, including map of event, concluding it was a strong tornado (pages from report missing on this event).

More information (newspaper articles and a track map) can be found in the vanilla 'Ontario May 1983' folder at the front of this year.

Tornado F-Scale Assessment

Marci Vanhoucke

Tornado Data Production Assistant, Environment Canada

July 29, 2005.

Classification: Confirmed Tornado

Date: Monday, May 2nd, 1983.

Location: Cambridge, Waterloo – Wellington

Assessment: F2

F-Code: AH

Explanation of Assessment: The preliminary report states this was a strong tornado. A newspaper article states that the roof from a 2-story apartment building was torn off, as well as a photo of a house without a roof and the 2nd story partly damaged. Due to the damage stated, this tornado is rated an F2.

CLASSIFICATION: Severe Thunderstorm

SOURCE/WATCHER ID:

EVENT TIME (UTC): 18-30 EVENT DAY: 2.0 MONTH: 5.0 YEAR: 1983.0 EVENT DURATION (HR): 0.0 (MIN): 0.0

DAY OF THE WEEK:

EVENT LOCAL: Cambridge-Guelph

ASOCTD PUBLIC RGN: Waterloo-Wellington-Dufferin

DETAILED DESCRIPTION:

tornado

INITIAL ASSESSMENT: YES

SPL WX STATEMENT IN EFFECT?: UKN STATEMENT LEAD TIME (HR): (MIN):

WATCH IN EFFECT?: UKN WATCH LEAD TIME (HR): (MIN):

WARNING IN EFFECT?: UKN WARNING LEAD TIME (HR): (MIN):

TORNADO:

WINDSPEED:

RAINFALL: MM RAIN DURATION:

HAIL DIAMETER: MM HAIL DESCRIPTION:

EVENT DESCRIPTION: Tornado

Mesoscale?: Synoptic?: Big Event?:

Statement Est Hit/Miss:

Watch Est Hit/Miss:

Warning Est Hit/Miss:

Separate Event (30km/30min): YES

Vetted by:

Vetted date:

0698310 A ✓

F1-F2(?)

TORNADO PROJECT SUMMARY SHEET

1. DATE AND TIME *May 2, 1983 1430 EDT*

2. LOCATION OR PATH (attach map) *Cambridge - Guelph, Ont.*

3. PATH LENGTH NOT KNOWN <1mi; 1-4mi; 5-10mi; 11-50mi; LENGTH IF >50mi

4. PATH WIDTH 5. TORNADO PART OF SQUALL LINE? YES; NO; UNKNOWN:

6. ANY UNUSUAL COLORATION? YES; NO; UNKNOWN

7. ANY UNUSUAL SOUND? YES; NO; UNKNOWN

8. IF ANSWER TO 6 OR 7 YES, ELABORATE;
6) "white funnel"

9. LIST ANY ASSOCIATED PHENOMENA *-heavy rain*
(Such as hail, vivid lightning heavy rain, no rain, etc.)

10. TOTAL DAMAGE ESTIMATE \$ 11. TOTAL DEATHS

12. TOTAL INJURED 13. TOTAL HOMELESS

14. LIST ALL REFERENCES

15. SUMMARIZE REMARKS PERTAINING TO (a) FUNNEL; (b) INTERESTING OR CAPRICIOUS EVENTS.

a) "white funnel" described by one witness.

*T.D. 175 47 500 500 0
48 04 200*

*L.D. 175 55 900 500 0
48 08 900*

Cambridge - missing pages
from report w/
map & info
on this event

THE MAJOR TORNADO OUTBREAK OF MAY 2 1983 IN SOUTHERN ONTARIO

ABSTRACT

A WIDESPREAD SEVERE WEATHER AND TORNADO OUTBREAK OCCURED ACROSS SOUTHERN ONTARIO ON MAY 2 1983. DAMAGE WAS REPORTED FROM THE LAKE ST CLAIR SHORES NORTHEASTWARDS TO THE OTTAWA RIVER VALLEY. ~~NINE~~ SEPERATE IDENTIFIABLE STORM TRACKS ARE DISCUSSED IN THIS PAPER AS WELL AS NUMEROUS OTHER MORE ISOLATED OCCURENCES. PRESS REPORTS AND ON SIGHT INSPECTIONS BY AES PERSONNEL ARE USED TO CATALOGUE THE DAMAGE. THIS REPORT WILL ALSO DESCRIBE THE SYNOPTIC SITUATION WHICH TRIGGERED THE OUTBREAK AND THE RESPOSE TO THE SITUATION BY THE ONTARIO WEATHER CENTER.

SYNOPTIC SITUATION

1. (SEE SURFACE ANALYSES FOR MAY 2 1983 FOR 12, 18 AND 21Z AND FOR MAY 3 00Z FIGS 1, 2, 3, 4)

AT 1200Z MAY 2 A MARITIME WAVE WAS LOCATED ^{IN THE} VICINITY OF HOUGHTON MICHIGAN WITH A WARM FRONT EASTWARDS AND A COLD FRONT SOUTHWESTWARDS. A LOW, WITH A CENTRAL PRESSURE OF 992 MB, WAS LOCATED NEAR MILWAUKEE WISCONSIN AND HAD A NORTHEAST ^{WARD} MOTION. TWO DOZEN TORNADOES HAD BEEN REPORTED ON MAY 1 THROUGH THE MISSISSIPPI VALLEY IN ASSOCIATION WITH THIS WAVE AND COLD FRONT. ON MAY 2 THE SEVERE WEATHER WAS ASSOCIATED WITH A SQUALL LINE, WHICH DEVELOPED AHEAD OF THE COLD FRONT, AS IT MOVED ACROSS SOUTHERN ONTARIO.

2. (SEE MAY 2 00Z AND 12Z FLINT MICHIGAN TEPHIGRAM ANALYSIS FOR MAY 2 1983-FIG 5)

THE 12Z FLINT TEPHIGRAM WAS IDEALLY SITUATED TO ASSESS THE THUNDERSTORM POTENTIAL AHEAD OF THE MARITIME COLD FRONT. THE ENVIRONMENT CURVE, REPRESENTING 12Z, CONTAINED BOTH POTENTIAL AND LATENT INSTABILITY. COMPARING THE 00Z SOUNDING WITH THE 12Z ONE, IT CAN BE SEEN THAT THE AIRMASS WAS DRY AT MID LEVELS, AND SINCE THE SEVERE WEATHER ANALYSIS HAD SHOWN THAT THE LOW LEVEL MOISTURE WOULD INCREASE, AN INCREASE IN POTENTIAL INSTABILITY COULD BE EXPECTED. ALSO IT WAS NOTED THAT THAT THE ENVIRONMENT CURVE HAD COOLED AT MID LEVELS WHILE THE LOWER LEVELS HAD WARMED, WHICH INCREASED THE LATENT INSTABILITY OF THE AIRMASS. THE FLINT TEPHIGRAM INDICATED THE STRONG LIKELIHOOD OF THUNDERSTORMS TOPPED AT 40 THOUSAND FEET. THE TROPOPAUSE APPEARED TO BE AROUND 34 THOUSAND. NOMAGRAMS INDICATED THE POTENTIAL FOR 3 CM HAIL AND 45 KNOT WIND GUSTS FROM THUNDERSTORMS.

1772

2

AN UPPER LEVEL JET CROSSED SOUTHERN ONTARIO FROM WINDSOR TO OTTAWA WITH THE JET MAXIMUM OF 150 KNOTS LOCATED OVER KANSAS. THE LOW LEVEL JET, WITH A MAXIMUM OF 60 KNOTS LOCATED OVER WESTERN PENNSYLVANIA, CROSSED EASTERN OHIO AND WESTERN NEW YORK THEN INTERSECTED THE UPPER JET NORTH OF LAKE ONTARIO. THE LOW LEVEL MOISTURE TONGUE (REPRESENTING THE AVERAGE DEW POINT TEMPERATURE FROM THE SURFACE TO 900 MB) WAS MOVING NORTHWARD ALONG THE LOW LEVEL JET AXIS THROUGH EASTERN OHIO AND BUFFALO. A 700 MB DRY LINE FORMED AN ARC THROUGH UPPER MICHIGAN, HAMILTON, AND EASTERN OHIO. THE DIVERGENT THICKNESS RIDGE (1000-500 MB) RAN THROUGH NORTH BAY AND SYRACUSE.

4. (SEE THE 1101Z AND 1702Z WATER VAPOUR SATELLITE PICTURES: FIGURES 7 AND 8)

reference!

THE MID AND UPPER LEVEL MOISTURE IS REPRESENTED ON THE WATER VAPOUR SATELLITE PICTURES BY THE LIGHT GREY AND WHITE SHADES WHILE THE DRIER AIR IS REPRESENTED BY THE DARKER GREY OR BLACK SHADES. AT 1101Z THE DRY LINE HAD JUST MOVED INTO SOUTHWESTERN ONTARIO AND BY 1701Z IT HAD MOVED EAST OF TRENTON. THESE PICTURES PRESENTED ~~GOOD~~ EVIDENCE FOR THE EXISTENCE OF DRY AIR AT THE MID AND UPPER LEVELS OVER SOUTHERN ONTARIO ON MAY 2.

CONCLUSIVE

SEQUENCE OF EVENTS MAY 2 1983

(SEE APPENDIX A FOR A LIST OF THE SEVERE WEATHER MESSAGES ISSUED BY THE ONTARIO WEATHER CENTER)

THE FOLLOWING DISCUSSION WILL GIVE A REAL TIME SUMMARY OF THE INFORMATION RECEIVED BY THE ONTARIO WEATHER CENTER ON MAY 2 AND THE ACTIONS TAKEN BY THE SEVERE WEATHER METEOROLOGIST.

(APPENDIX A IS A LIST OF THE SEVERE WEATHER MESSAGES ISSUED BY THE ONTARIO WEATHER CENTER)

1400Z: THE FLINT TEPHIGRAM INDICATED THAT ONCE SURFACE TEMPERATURES REACHED ABOUT 22C ACTIVE CONVECTION WOULD BEGIN. BY 10 AM EDT (1400Z) UNDER BRIGHT SUNSHINE TEMPERATURES ACROSS SOUTHERN ONTARIO AND LOWER MICHIGAN WERE ALREADY APPROACHING THIS MARK.

1430Z: DETROIT RADAR INDICATED A RAPIDLY DEVELOPING LINE OF THUNDERSTORMS WITH TOPS TO 30 THOUSAND AND V.I.P. INTENSITY LEVELS OF 4 AND 5 (LEVEL 5 CELLS ARE CLASSIFIED AS INTENSE).

(V.I.P. SHOULD BE DEFINED)

1500Z: A NORTHEAST TO SOUTHWEST LINE OF THUNDERSTORMS BEGAN TO SHOW UP ON EXETER RADAR ABOUT 60 KM WEST OF SARINIA. (FIGURE 9).

1530Z: SEVERE WEATHER WATCH #13 IS ISSUED FOR THE REGIONS OF LAKE ST CLAIR LAKE ERIE AND LAKE HURON. MENTION IS MADE THAT IT MIGHT HAVE TO BE EXTENDED TO THE REST OF SOUTHERN ONTARIO. THIS WATCH IS IN EFFECT UNTIL 5.00 PM (2100Z).

1783

1600-1605Z: PHONE CALL FROM THE WINDSOR WEATHER OFFICE INFORMS US THAT ~~REPORTS~~ OF HAIL AND FUNNEL CLOUDS HAVE JUST BEEN PICKED UP FROM WEST OF DETROIT.

REPORTED

AREAS

1610Z: SEVERE THUNDERSTORM WARNING #14 IS ISSUED FOR ESSEX LAMBTON KENT HURON AND NORTHERN MIDDLESEX COUNTIES. MENTION IS MADE OF THE REPORT OF FUNNEL CLOUDS. THIS WARNING IS IN EFFECT UNTIL 2.00 PM (1800Z)

16.45Z: SEVERE WEATHER WATCH #15 ISSUED FOR AREAS FURTHER EAST,
FOR SOUTHERN GEORGIAN BAY WESTERN LAKE ONTARIO AND NIAGARA
REGIONS IN EFFECT UNTIL 7.00 PM.

1655Z: FIRST WEATHER WATCHER REPORT RECEIVED OF TORNADO AT
WALPOLE ISLAND.

1655Z: (FIGURE 10) THE FIRST INDICATIONS OF THE INTENSITY OF
THE SQUALL LINE SHOWS UP ON WOODBRIDGE RADAR. HIGH INTENSITY
RETURNS SHOW UP AT 5 KM OVER LAKE HURON AT THE MAXIMUM RANGE OF
THE RADAR. EXPERIENCE HAS SHOWN THAT THIS KIND OF RETURN FROM
WOODBRIDGE RADAR HAS A HIGH CORRELATION WITH THE OCCURENCE OF
SEVERE WEATHER. MAXIMUM CLOUD TOPS ARE INDICATED AT 12 KM (40 THSD
FEET).

1700Z: BASED ON INTENSE RADAR RETURNS A SEVERE THUNDERSTORM
WARNING #16 IS ISSUED FOR BRUCE AND GREY COUNTIES IN EFFECT
UNTIL 2.30 PM

1705Z: ^{TWO} ~~Z~~ REPORTS RECEIVED FROM WEATHER WATCHERS OF TORNADO
TOUCHDOWNS EAST OF SARNIA.

1708Z: TORNADO WARNING ISSUED FOR LAMBTON COUNTY IN EFFECT
UNTIL 2.00 PM

1710-1730Z: REPORTS OF 3 CM HAIL AND 100 KMH WINDS RECEIVED
FROM WINDSOR. FURTHER REPORTS CONFIRM THE INTENSITY OF REECES
CORNER STORM.

1710Z: (FIGURE 11) RADAR INDICATES NEARLY SOLID LINE OF SEVERE
THUNDERSTORMS FROM GEORGIAN BAY TO LAKE ST CLAIR MOVING EAST
AT 50 KMH.

1725Z: TORNADO WARNING #18 ISSUED FOR DOWNSTREAM COUNTIES OF
ESSEX KENT ELGIN MIDDLESEX OXFORD WATERLOO WELLINGTON AND DUFFERIN
VALID UNTIL 2.30 PM

1750Z: SEVERE WEATHER WATCH #19 ISSUED FOR EASTERN LAKE ONTARIO
AND HALIBURTON REGIONS.

1755Z: (FIG 12 WOODBRIDGE 1746Z REPORT) RADAR INDICATES ^{INTENSE} ~~EXTREME~~
CELLS MOVING NORTHEASTWARDS FROM GEORGIAN BAY INTO MUSKOKA AND
PARRY SOUND COUNTIES; ~~AND~~ TORNADO WARNING #20 ISSUED IN EFFECT
UNTIL 3.30 PM

18.10Z: TORNADO WARNING #21 ISSUED FOR THE NEXT DOWNSTREAM AREAS OF ~~THE~~ STILL EXTENSIVE LINE OF THUNDERSTORMS. COUNTIES WARNED: HALDIMAND-NORFOLK BRANDT HAMILTON-WENTWORTH HALTON SIMCOE AND FINALLY YORK. WARNING IN EFFECT UNTIL 3.30 PM

18.30Z: REPORT OF HAIL AND GUST TO 48 KNOTS FROM LONDON WEATHER OFFICE. AT ABOUT THE SAME TIME EXETER RADAR KNOCKED OUT OF SERVICE BY LIGHTNING.

18.40Z: REPORT FROM KITCHENER OF FUNNEL CLOUD, GUSTS TO 64 KNOTS AND DAMAGE TO AIRCRAFT AT LOCAL AIRPORT.

18.40Z: TORNADO WARNING #22 FOR NIAGARA DURHAM VICTORIA AND HALIBURTON COUNTIES AND METRO TORONTO IN EFFECT UNTIL 4.30 PM

1850-1925Z: REPORTS OF WALL CLOUDS 1 CM HAIL HEAVY WINDS AND RAIN FROM LOCATIONS WEST AND NORTH OF TORONTO.

19.40Z: REPORTS OF HIGH WINDS AND HAIL STOUFFVILLE AND NORTH YORK.

1945Z: REPORT OF A FUNNEL CLOUD SCARBOROUGH JUST OFF SHORE OVER LAKE ONTARIO.

2005Z: TORNADO WARNING #23 ISSUED FOR NEXT DOWNSTREAM COUNTIES OF PETERBOROUGH NORTHUMBERLAND HASTINGS AND RENFREW IN EFFECT UNTIL 5.30 PM AND FOR LENNOX (AND) ADDINGTON AND FRONTENAC COUNTIES IN EFFECT UNTIL 6.30 PM

THIS COMPLETES THE SUMMARY OF THE EVENTS ASSOCIATED WITH THE MAIN SQUALL LINE WHICH PRODUCED ALL THE DAMAGE. OF NOTE IS THAT MUCH OF THE EVIDENCE OF THE EXTENT OF THE DAMAGE WAS UNKNOWN AT THE TIME.

A SECOND SQUALL LINE FROM ORILLIA TO GEORGETOWN DEVELOPED BETWEEN 5.30-6.00 PM AND WAS ASSOCIATED WITH HAIL BUT NO KNOWN DAMAGE. A WARNING WAS ISSUED IN ASSOCIATION WITH THIS LINE. SEVERE WEATHER WATCHES REMAINED IN EFFECT UNTIL 9.00 PM THAT EVENING.

STORM DAMAGE FROM MAY 2 1983

FOR THE PURPOSE OF THIS REPORT I'VE DIVIDED SOUTHERN ONTARIO UP INTO FOUR REGIONS: LAKE ST CLAIR, SOUTHERN LAKE HURON, WESTERN LAKE ONTARIO AND HALIBURTON. A MAP OF EACH REGION (FIGURES 13,14,15,16) GIVES THE LOCATION OF DAMAGE WITH TRACKS OF STORMS WHERE THESE ARE OBVIOUS. IF A TORNADO HAS BEEN CONFIRMED OR IS SUSPECTED AN ESTIMATE OF THE FUJITA TORNADO INTENSITY WILL BE GIVEN AS WELL AS THE PATH LENGTHS.

Table of Fujita intensity + reference

~~APPENDIX A IS A LIST OF THE SEVERE WEATHER WARNING MESSAGES OF THE DAMAGE ALONG THE PATH~~

~~ISSUED BY THE ONTARIO WEATHER CENTER~~

STORM A: 1300 EDT; REECES CORNERS-TORNADO F4; DAMAGE ALONG PATH OF 25 KM. ESTIMATED DAMAGE IN EXCESS OF 20 MILLION DOLLARS; 20-25 BUILDINGS EXTENSIVELY DAMAGED IN REECES CORNERS; 20 MORE RURAL FARM BUILDINGS EXTENSIVELY DAMAGED

STORM B: 1300 EDT; WALPOLE ISLAND-EAST OF PORT LAMBTON-TORNADO F2; PATH LENGTH 15 KM OVER CANADIAN TERRITORY; ESTIMATED DAMAGE IN EXCESS OF 1 MILLION DOLLARS.

LOCATION 1-15 BUILDINGS DAMAGED ON WALPOLE ISLAND

LOCATION 2-EAST OF PORT LAMBTON; BARN DESTROYED; ROOF TORN OFF GARAGE

STORM C: TUPPERVILLE- EAST OF DAWN VALLEY
WIND DAMAGE; BARN AND GREENHOUSE DESTROYED,

STORM D: 4 MILES WEST OF MERLIN- TORNADO REPORTED ON GROUND.
NO REPORTS OF DAMAGE RECEIVED.

LAKE ONTARIO (FIGURE 15)

28

^{1530 EDT}
STORM A: REXDALE- PROBABLE TORNADO FO PATH LENGTH 23 KM SURVEY BY STEVE LEITCH. EARLY ESTIMATES OF DAMAGE \$1-3 MILLION.

LOCATION 1- 100 SQUARE METERS OF FACTORY ROOF LIFTED THEN COLLAPSED

2- TREES UPROOTED. REMOVAL OF ONE THIRD OF ROOF FROM HOUSE; REMOVAL OF SHINGLES FROM OTHER HOUSES; CHIMNEY KNOCKED DOWN; FEW TREES UPROOTED.

3-SHINGLE AND T-V ANTENNAE DAMAGE TO HOUSES; DAMAGE TO 2 FACTORIES UNDER CONSTRUCTION; WALLS AND ROOF COLLAPSED.

4-TELEPHONE POLES SNAPPED

5-A COUPLE OF ROOFS ON BUILDINGS PARTIALLY LIFTED.

^{1530 EDT}
STORM B: KETTLEBY- PROBABLE TORNADO FO PATH LENGTH 21 KM; SURVEY BY STEVE LEITCH.

LOCATION 1-NUMEROUS TREES BROKEN OR UPROOTED, SMALL BARN ROOF AND TOP HALF OF ANOTHER BARN TORN APART

2-BARN DESTROYED; TREES UPROOTED

3-UPROOTED TREES, TOP TAKEN OFF SILO, BARN ROOF OFF, POWER POLES KNOCKED DOWN

OTHER STORM REPORTS IN THE TORONTO AREA:

¹³⁰⁰ C-GEORGETOWN AREA-A FEW TREES AND POWER LINES DOWN ESPECIALLY
^{PT} IN GLEN WILLIAMS

D-NORTHWEST OF BRAMPTON-20 HYDRO POLES DOWN

E-NORTH BRAMALEA-A COUPLE OF HOUSES UNDER CONSTRUCTION DAMAGED PUSHED OFF FOUNDATIONS.

¹⁰⁰ F-SCARBOROUGH- FUNNEL CLOUD SIGHTED NEAR LAKE ONTARIO SHORELINE.
^{PT} SECTION OF ROOF TORN OFF HOUSE KINGSTON ROAD AND MIDLAND AREA.

STORMS IN THE PETERBOROUGH AREA:

¹⁵ G-LAKE SUGOG-UNCONFIRMED REPORT OF DAMAGE TO COTTAGES ON
NORTHWEST SHORE

¹⁵ H-FOWLERS CORNERS-ROOF AND EAST AND NORTH WALLS OF BARN DESTROYED

¹⁰⁰ I-SPRINGVILLE-PORION OF ROOF OF CHURCH BLOWN OFF, REST OF ROOF
^{PT} DISLODGED

J-PETERBOROUGH CITY- TREES DOWN, ROOF TAKEN OFF TRANSMISSION REPAIR
OUTLET

1950

HALIBURTON REGION (Figures 16)

1830 EDT

STORM AT BARRY'S BAY-GOLDEN LAKE-JUST NORTH OF RENFREW;
TRACK ON MAP ONLY APPROXIMATE DUE TO LACK OF DATA
PATH OF TREE AND TELEPHONE DAMAGE REPORTED BY PRESS FROM
WEST OF BARRY'S BAY RIGHT THROUGH TO NORTH OF RENFREW.

LOCATION 1-KILALOE AREA-MINOR DAMAGE TO FARM BUILDINGS, HOUSE
TRAILER KNOCKED OVER
2-GOLDEN LAKE -DAMAGE TO COTTAGES ALONG GOLDEN LAKE

OTHER STORMS IN THE HALIBURTON REGION:
B-REPORT OF SIGHTED TORNADO AND TREE DAMAGE NEAR CARNARVON
C-UNCONFIRMED REPORT TO COTTAGES BANCROFT AREA.

1830 EDT - ^{DAMAGE}
OTTAWA AREA- REPORT OF TORNADO SIGHTED ALONG OTTAWA RIVER, TREE
DAMAGE.

~~CONCLUSIONS AND RECOMMENDATIONS~~

THE MAY 2 SEVERE STORM OUTBREAK IN SOUTHERN ONTARIO PRODUCED 3 STRONG TORNADOES (WALPOLE ISLAND, REECES CORNERS AND CAMBRIDGE); 4 WEAK TORNADOES WHICH CAUSED PROPERTY DAMAGE (RATHO, INNERKIP, REXDALE AND KETTLEBY); AND 3 REPORTED TORNADO TOUCHDOWNS WITH NO APPARENT PROPERTY DAMAGE (MERLIN, CARNARVON, OTTAWA) THERE WERE AS WELL NUMEROUS OTHER STORMS WHICH CAUSED DAMAGE BUT FOR WHICH THERE IS NO SUBSTANTIAL EVIDENCE TO CALL THEM TORNADOES. TOTAL DAMAGE ACROSS SOUTHERN ONTARIO FROM THE MAY 2 OUTBREAK MAY WELL EXCEED \$30 MILLION.

ACCORDING TO THE TORNADO STATISTICS COMPILED BY M. J. NEWARK MAY 2 1983 PROBABLY REPRESENTS THE MOST WIDESPREAD 1 DAY OUTBREAK OF SEVERE WEATHER IN ONTARIO SINCE THE DAY OF THE SARNIA TORNADO IN 1953.

Reference

↑
MAY

THE SQUALL LINE WHICH PRODUCED THE SEVERE WEATHER ON MAY 2 WAS IDENTIFIED EARLY AND TRAVELLED IN A SURPRISINGLY UNIFORM FASHION ACROSS SOUTHERN ONTARIO. AS A RESULT MOST AREAS THAT WERE HIT BY STORMS HAD RECEIVED WEATHER WATCHES MORE THAN 1 HOUR BEFORE THE STORM ARRIVED AND WEATHER WARNINGS ONE HALF HOUR OR BETTER IN ADVANCE OF THE DAMAGE OCCURRING. *FROM 1-3 Hours*

DELAYS IN PUTTING OUT THE INITIAL WATCHES AND WARNING FOR SOUTHWESTERN PORTIONS OF THE PROVINCE COULD HAVE OCCURED EXCEPT FOR TIMELY INFORMATION RECEIVED BY PHONE FROM THE WINDSOR WEATHER OFFICE. WINDSOR HAS A TELEVISION MONITOR WHICH CAN RECEIVE READOUTS FROM U.S. RADARS AND CONSEQUENTLY THEY WERE ABLE TO KEEP THE ONTARIO WEATHER CENTER UP TO DATE ON THE DEVELOPMENT OF THE SQUALL LINE. IN ADDITION THE WINDSOR OFFICE TELEPHONED INFORMATION CONCERNING THE FIRST REPORTS OF HAIL AND FUNNEL CLOUDS FROM LOWER MICHIGAN. BECAUSE OF THIS DATA A SEVERE STORM WARNING WHICH MENTIONED FUNNEL CLOUDS WAS ISSUED SOME 30 TO 45 MINUTES AHEAD OF THE WALPOLE ISLAND AND REECES CORNERS TORNADOES.

WE WOULD RECOMMEND THAT THE ONTARIO WEATHER CENTER SHOULD HAVE THE SAME CAPABILITIES AS THE WINDSOR OFFICE TO RECEIVE THE U.S. RADAR DATA IN REAL TIME ON A MONITOR. THE PRESENT SITUATION IS LESS THAN SATISFACTORY CONSIDERING THE WEATHER CENTER'S RESPONSIBILITY FOR ISSUING WARNINGS.

THE CAPPI COLOURED RADAR MONITORS FROM WOODBRIDGE AND EXETER AVAILABLE IN THE ONTARIO WEATHER CENTER ONCE AGAIN PROVED INVALUABLE IN TRACKING THIS SEVERE WEATHER EVENT. THE CAPABILITIES OF THE WOODBRIDGE DISPLAY ^{THAT} ALLOW US TO FOLLOW THE DEVELOPMENT OVER A TWO HOUR CYCLE OF CLOUD TOPS AND MAXIMUM REFLECTIVITY RETURNS ABOVE 2 KILOMETRES, ARE VERY VALUABLE IN SEVERE WEATHER DETECTION AND TRACKING.

ONE CONTINUING PROBLEM DIMINISHES THE EFFECTIVENESS OF OUR RADAR COVERAGE. WOODBRIDGE AND EXETER RADARS ARE VERY DISSIMILAR IN THE INTENSITIES THEY SHOW FOR THE SAME CELL. WE WOULD RECOMMEND THAT EVERY EFFORT BE MADE TO MAKE ALL CAPPI OUTPUTS COMPATABLE AND THAT THE FORMAT OF THE WOODBRIDGE OUTPUT BE ADOPTED. THAT IS ALL CAPPI OUTPUTS SHOULD INCLUDE A) A CLOUD TOP PANEL; B) A PANEL OF MAXIMUM REFLECTIVITY ABOVE 2 KM; C) THE ABILITY TO SWITCH BACK AND FORTH FROM CLOUD TOP TO CAPPI TO MAXIMUM REFLECTIVITY PANELS FOR A SINGLE TIME FRAME.

ACKNOWLEDEMENTS

THE AUTHORS WOULD LIKE TO THANK STEVE LEITCH AND M. J. NEWARK FOR THEIR INPUTS INTO THIS REPORT. FOR MORE DETAIL ON THE REECES CORNERS, WALPOLE ISLAND, REXDALE AND KETTLEBY STORMS SEE THEIR REPORTS.

who?