

---

**Confirmed Tornado  
Flamborough/Burlington, Ontario  
August 4, 1999**

**Date- Local:** Saturday, August 4<sup>th</sup>, 1999

**UTC:** Saturday, August 4<sup>th</sup>, 1999

**Time- Local:** 1330-1500

**UTC:** 1730-1900

**Location:** Flamborough to Burlington

**Region:** Halton-Peel

**Classification:** Confirmed Tornado

**Category:** A

**Casualties:** None

**Track Length:** 35 000 m

**Width:** 100 m

**Motion:** ESE

**Damage Estimate:** \$300 000 -\$400 000

**F-Scale Rating:** F2

**Code:** MH

**Damage Survey:** David Sills, AES King Radar, Mark Payne, RCTO, and Paul Pilon,  
AEB Guelph

**Spotter Reports:** Six

**Other Documents:**

Storm Damage Survey Report by David Sills, AES King Radar, Mark Payne,  
RCTO, and Paul Pilon, AEB Guelph

Notes from Damage Survey

Ten Photographs of Damage, presumably taken by investigative team

Newspaper Articles

---

*sjs*

Meteorological Service of Canada  
4905 Dufferin Street, ARMP  
Downsview, Ontario M3H 5T4  
**CANADA**

---

## **Tornado F-Scale Assessment**

Sarah J. Scriver

Tornado Data Production Assistant, Environment Canada

April 21<sup>st</sup>, 2004

---

**Classification:** Confirmed Tornado

**Date:** Saturday, August 4<sup>th</sup>, 1999

**Location:** Flamborough to Burlington, Halton-Peel Region

**Re-Assessment:** F2

**F-Code:** MH

**Explanation of Assessment:** Unanchored mobile home completely obliterated and debris spread for 100s of meters across a field; F2. Several large barns damaged or destroyed. Roof damage to some houses. Many trees snapped or uprooted, farm equipment damaged.

---

*SJS*

# Storm Damage Survey - August 4, 1999

## *Flamborough / Burlington*

### Investigators

David Sills, AES King Radar

Mark Payne, RCTO

Paul Pilon, AEB Guelph

*All photographs Copyright 1999 Environment Canada*

### *Quick Facts*

Severe Weather Type	Tornado
Locations	Flamborough to Burlington
Time	13:30 EDT - 15:00 EDT
Magnitude	F2
Path Length / Direction	35 km / ESE
Path Width	100 m
Significant Damage	Several large barns damaged or destroyed, mobile home destroyed, roof damage to houses, many large trees snapped or uprooted, farm equipment damaged
Damage Estimate (Source)	\$ 300 000 - \$400 000 (DS + owners)

### Overview

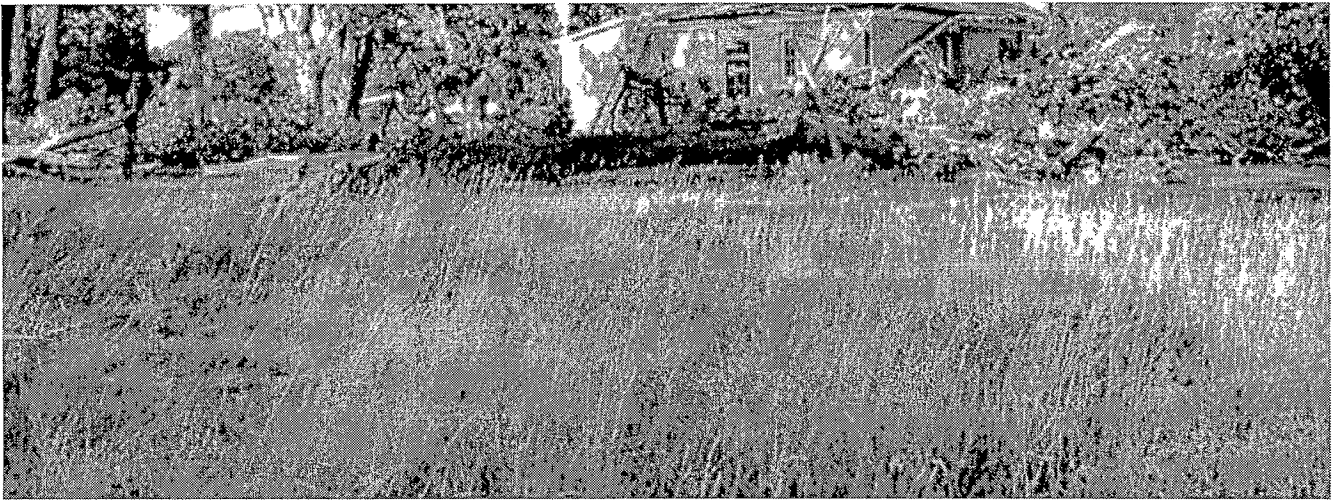
A trough of low-pressure swinging southeast through Southern Ontario was the focus for the development of several low-topped (8-10 km echo tops) thunderstorms on August 4, 1999. There were

several reports of funnel clouds and damage due to tornadoes received by RCTO (see Appendix A). No injuries or fatalities were reported. A thunderstorm tracked SE through Flamborough Township to the City of Burlington then out over Lake Ontario after about 13:35 EDT. The survey team investigated damage in the Flamborough area on the evening of August 4. The investigation was continued the next day and an aerial survey of the Flamborough / Burlington damage swath was conducted. The team concluded that a tornado caused intermittent damage reaching up to F2 in intensity. The damage track extended nearly 35 km from Valens conservation area to the City of Burlington to over western Lake Ontario. The track width was found to be up to 100 m. Several large barns and a mobile home were destroyed. Many large trees were snapped or uprooted.

### Damage in Flamborough Township

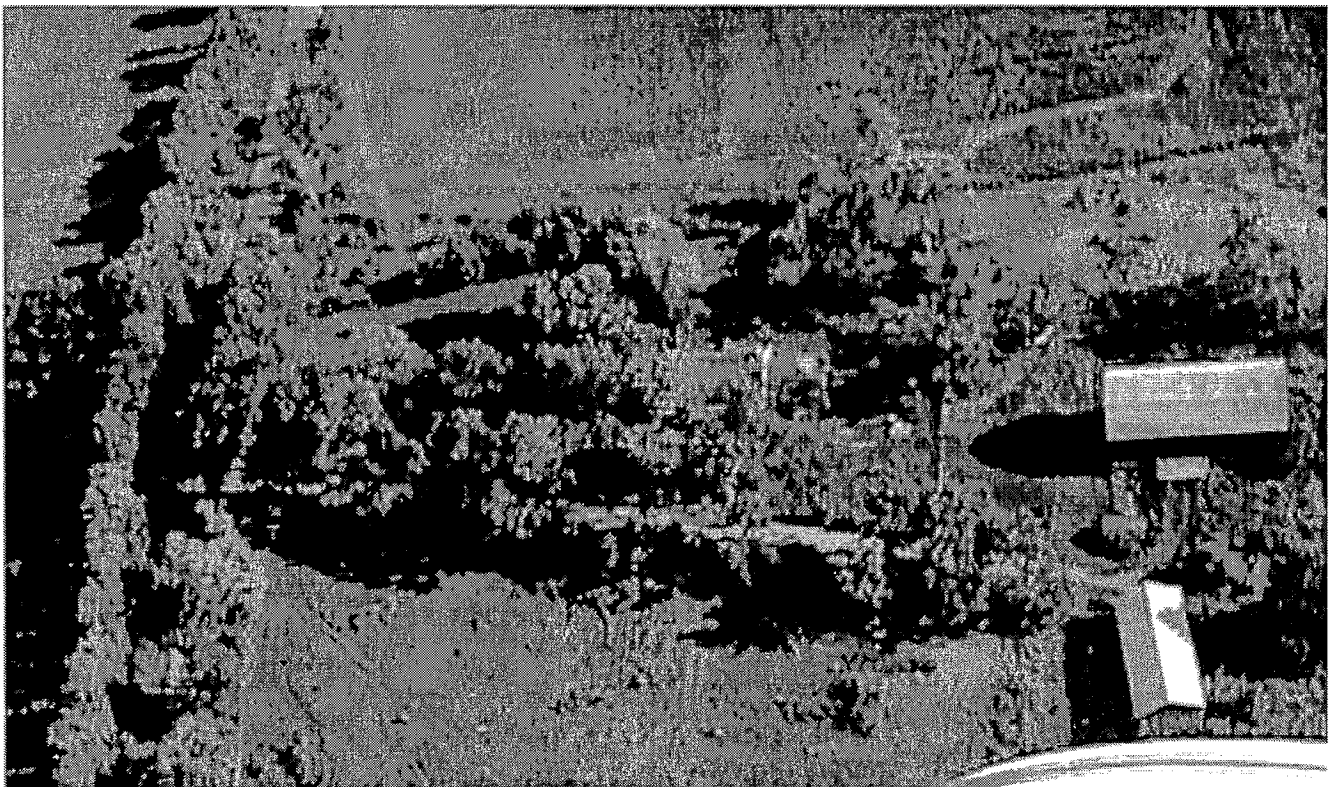
The first area visited by the survey team was Flamborough Township. Damage appeared to begin near Valens conservation area. On the northeast side of the park, many large trees were down causing damage to the roof of a house. The owner related that boaters on the nearby lake spotted a condensation funnel lowering to the ground over this area.





Facing NE. Roof of house tarped, large trees twisted, snapped or uprooted.

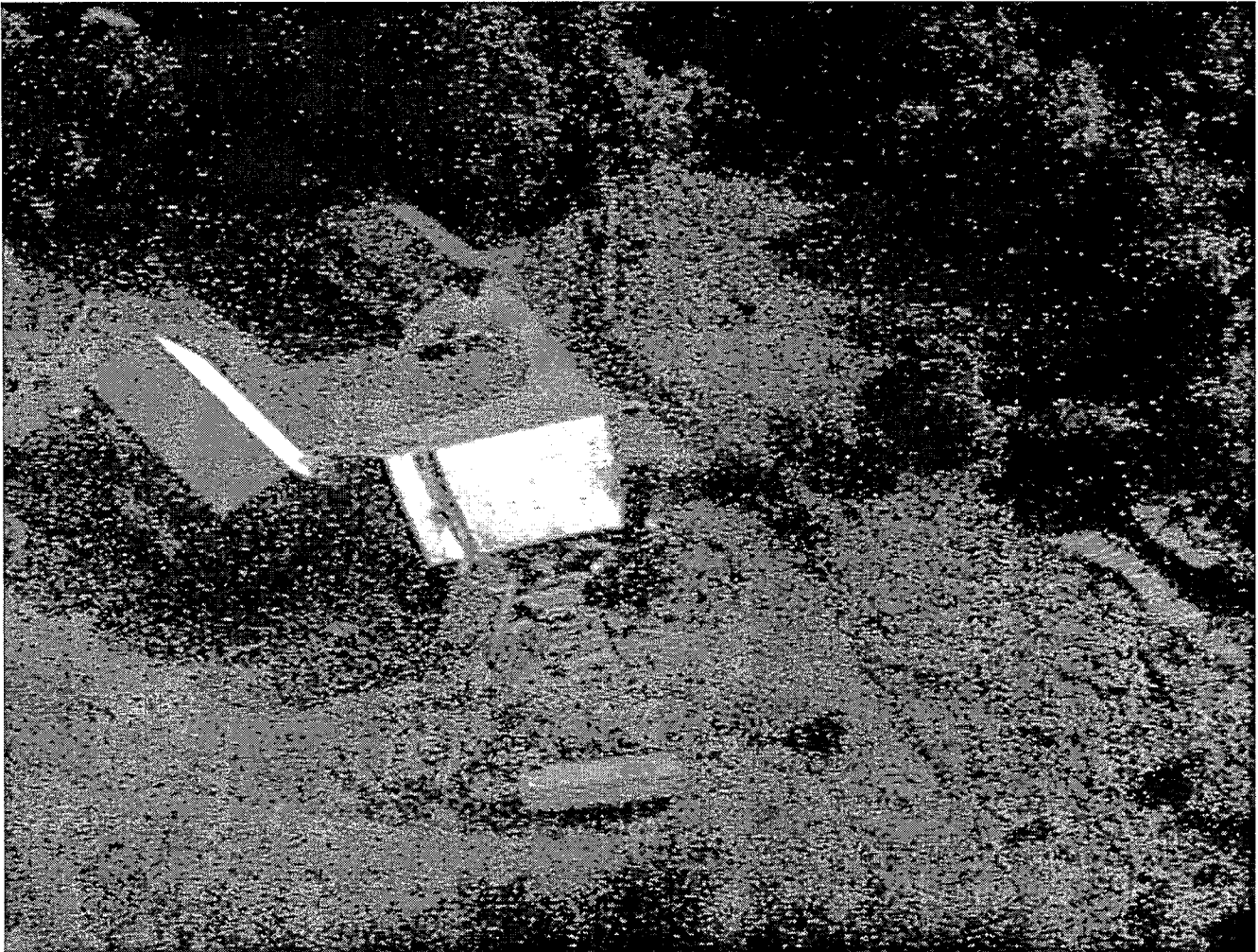
Below is an aerial view of the damage here facing south.



Facing South, house to centre of image. Tornado moved from barns toward house then across road to left.

Further to the southeast, two neighbouring farms suffered significant damage. The Zahoruk farm had the main barn partially

destroyed and a smaller barn demolished. Damage here was estimated at around \$100 000 by an insurance adjuster.



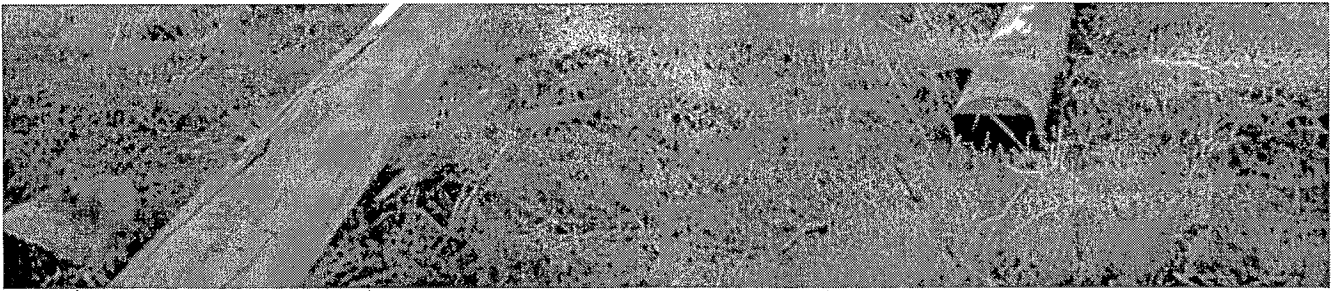
Facing SW.

At the Hunter farm to the east, the main barn lost its roof and another large outbuilding was completely destroyed. Trees on the property were down in various directions. Debris was blown into trees and downwind more than 100 m. An insurance adjuster estimated the damage to this farm to be \$125 000.



Facing SE, tornado moved SE jsut to the east of the creek (treed)



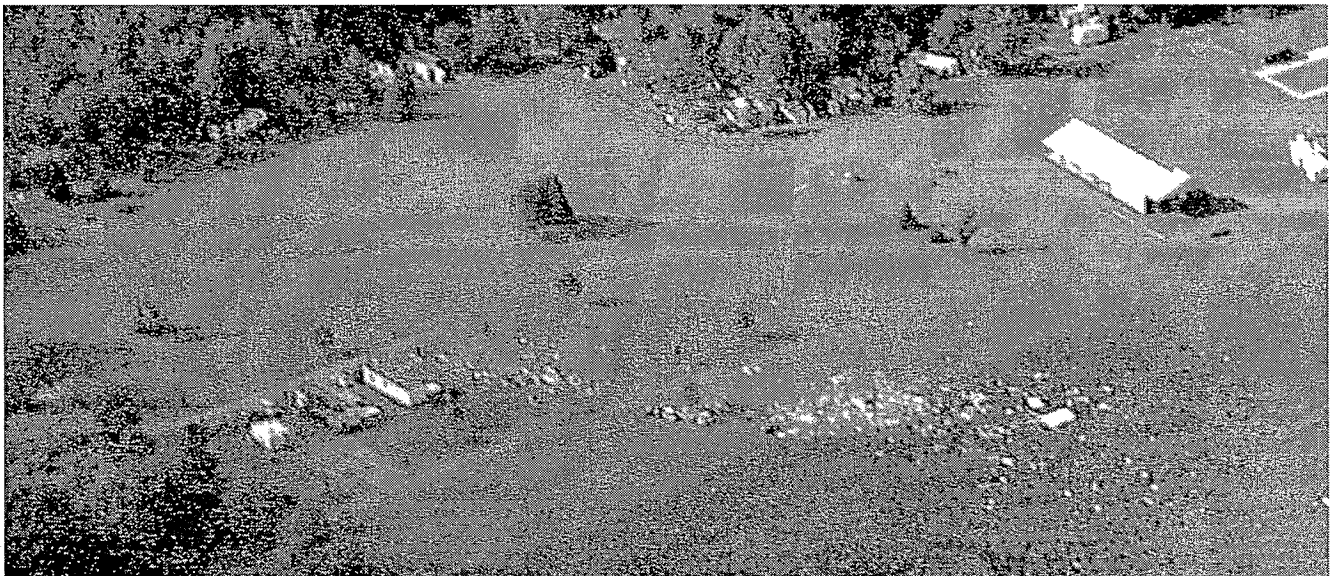


Facing NE. Main barn roof removed and outbuilding to left destroyed.

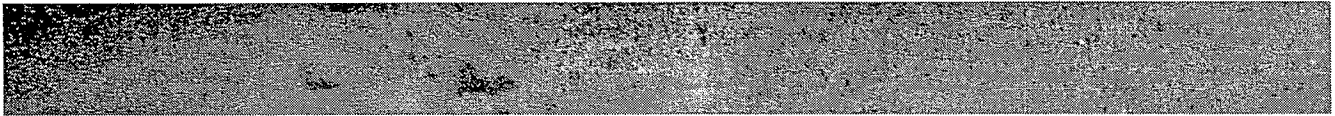
A witness in the area (John McPhail) stated that it wasn't even raining when the tornado hit. Also, there was a small funnel cloud ahead of a larger one. The two separated and the larger one caused most of the damage.

### Damage in Burlington

Though the tornado appears to have been maintained along a 35 km track, damage was difficult to find southeast of the Valens conservation area. The next area of significant damage was near the Lost Forest Trailer Park in northwestern Burlington. Here, another barn was damaged and a mobile home was completely destroyed. The mobile home appears not to have been suitably anchored to the ground.







Facing NE, almost all damage related to destruction of one mobile home.



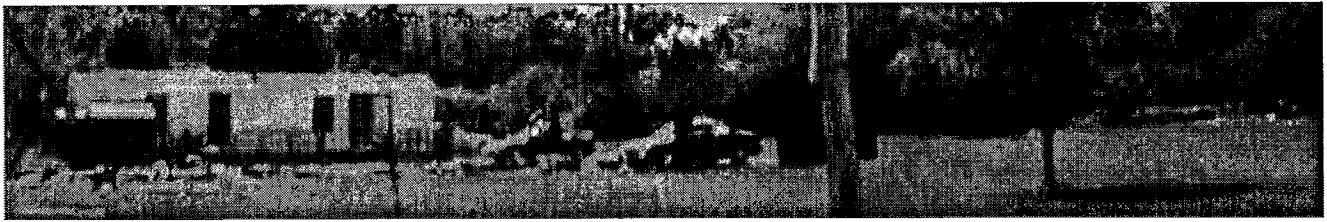
Facing SE, 'foundation' in foreground with debris in distance.



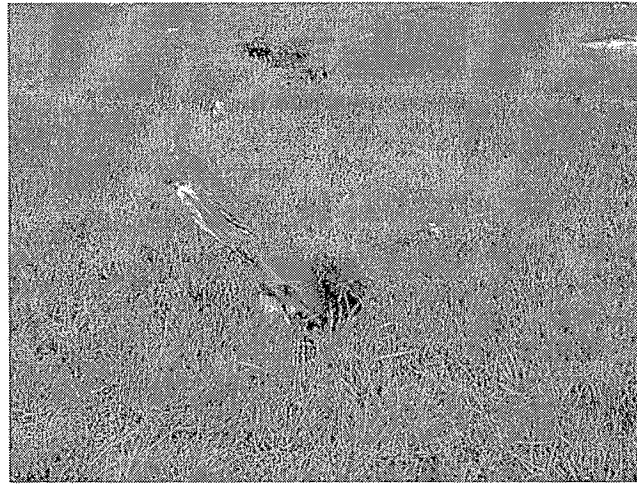


Facing W, mobile home base upside down and roof, walls and contents scattered downwind.



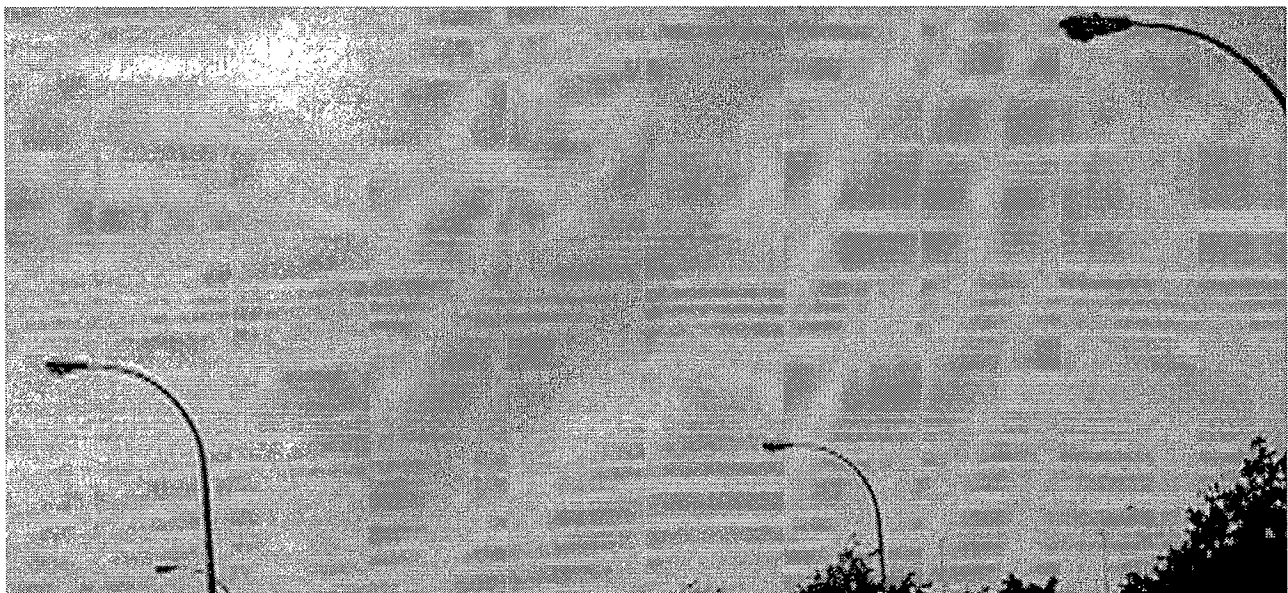


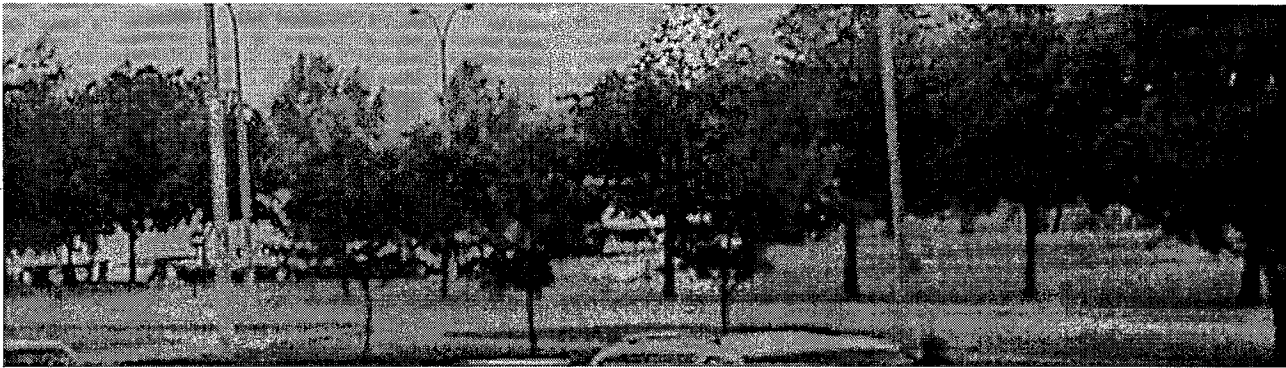
Facing NW, a piece of screen door from the mobile home was found on the hydro line to the E of the foundation - evidence for cyclonic rotation.



Facing ESE, ground impaled by 2x4 missile.  
Could not remove by hand, estimate about 1 m in ground.

The tornado continued in its southeast movement and entered the more urban part of Burlington. No significant damage was reported or found here. However, a picture of the tornado was snapped as the tornado moved offshore into Lake Ontario.

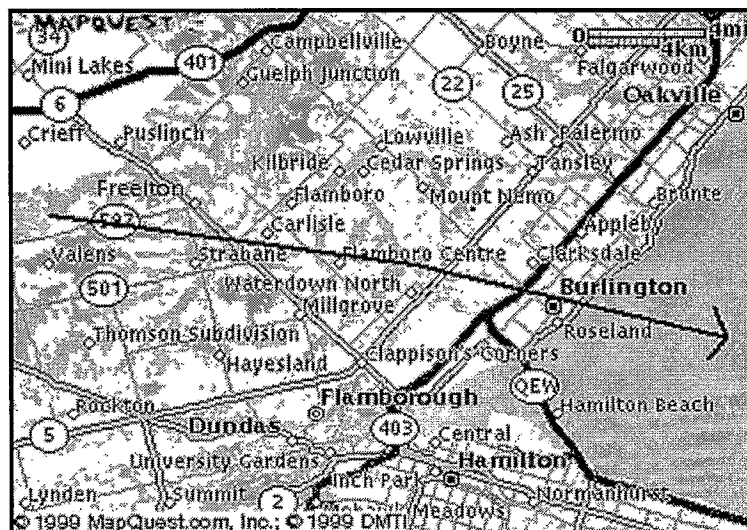




Facing NE from Canadian Centre for Inland Waters, note cyclonic spiral pattern in cloud, photo Brent Malseed.

## Conclusions

Evidence of rotation was found at each site consistent with a cyclonically rotating tornado. In addition, there were several witnesses to and photographs of funnel clouds or tornadoes. The extensive damage to barns, trees and the mobile home appears to be consistent with F2 damage on the Fujita scale (Fujita, 1981). However, damage was found to be intermittent along the damage path indicating that there may have been a succession of tornadoes along the track rather than a single tornado. Nevertheless, the damage sites appear to be in a relatively straight line consistent with a tornado moving from WNW to ESE over a distance of approximately 35 km.



King City Doppler radar images suggest that the thunderstorm that spawned this tornado had a mesocyclone between 13:30 EDT and 14:50 EDT, consistent with reports of the times of tornado damage. Media coverage for this event was intense. Several media stories are provided in Appendix B.

## Reference

Fujita, T.T. 1981. Tornadoes and Downbursts in the Context of Generalized Planetary Scales. *J. Atmos. Sci.* **38**: 1511-1534.

## Appendix A

SOURCE/WATCHER ID: Brad Patton, Flamborough Fire Department  
 EVENT TIME (UTC): 18:30  
 EVENT LOCALE: Flamborough Twp  
 ASOCTD PUBLIC RGN: Hamilton-Wentworth  
 DETAILED DESCRIPTION: possible tornado, 20 mile long swath of damage extending from Valens Conservation Area in a SE direction to Millborough, roofs off of houses/barns, heavy round bails moved, 35' trailer with 2 fridges in it destroyed  
 905-689-2282

SOURCE/WATCHER ID: Halton Regional Police via MOE  
 EVENT TIME (UTC): 18:23  
 EVENT LOCALE: 4449 Town line W, Burlington  
 ASOCTD PUBLIC RGN: Hamilton-Wentworth  
 DETAILED DESCRIPTION: funnel cloud spotted, trailer overturned and thrown 70 ft and destroyed, hydro pole broken, 905-825-4747 ext 5170 (Caralee Roberts)

SOURCE/WATCHER ID: Nancy S-S  
 EVENT TIME (UTC): 18:20  
 EVENT LOCALE: Burlington  
 ASOCTD PUBLIC RGN: Hamilton-Wentworth  
 DETAILED DESCRIPTION: good sized waterspout or funnel cloud NE of CCIW  
 EVENT TIME (UTC): 17:35

EVENT LOCALE: Flamborough  
ASOCTD PUBLIC RGN: Hamilton-Wentworth  
DETAILED DESCRIPTION: funnel cloud spotted with a breif touchdown

SOURCE/WATCHER ID: Marianne Zahoruk  
EVENT TIME (UTC): 18:30  
EVENT LOCALE: 1457 Regional Rd 97 just S of Freelton  
ASOCTD PUBLIC RGN: Waterloo-Wellington-Dufferin  
DETAILED DESCRIPTION: supposed touchdown of funnel cloud

## Appendix B

### *a) Hamilton Spectator, August 5, 1999*

#### **TORNADO DESTROYS HOUSE TRAILER**

SUSAN CLAIRMONT  
The Spectator

[Brent Malseed photo and caption]

A tornado that destroyed a trailer in Burlington and another that ripped the roof off a Hamilton Mountain house rattled the unscathed homeowners. Weather experts were less impressed by the weakling storm.

Funnel clouds that touched down twice yesterday afternoon during violent thunderstorms were spectacular to most who witnessed their fury. But Environment Canada officials say that on a tornado scale of zero to five, this weather show ranked zip.

The funnel clouds were as weak as they could be while still ranking as tornadoes, said Andrea Sale of Environment Canada's Toronto office.

#### **RIPPED OFF ROOF**

Tell that to Dave Prosia and his mother Wilma.

The two were at their Stone Church Road East home just after 1 p.m. when the first minor tornado ripped off a section of their roof, leaving the living room exposed.

Just moments before, the swirling winds outside the window had persuaded the Prosia's to seek shelter in the basement.

Neighbours reported seeing shingles, aluminum siding and a plastic lawn chair spiralling in mid-air above the street.

Less than an hour later, John and Karen Hawkins' trailer was destroyed when one of the tornados picked it up from its site in Lost Forest Park on Milborough Line in Burlington and broke it in pieces.

About 2 p.m. the sky over the trailer park became extraordinarily dark.

A moment later, a southeast wind sliced through the area, leaving all but the Hawkins' trailer untouched.

The couple was not home at the time.

Even weak tornadoes are rare in southern Ontario.

No other tornadoes were reported in the province.

"You're unique in that you had your very own tornadoes," weather specialist Sale told The Spectator.

A severe storm warning was in effect for the region, but the tornadoes were not anticipated. Meteorologists are only capable of forecasting them a couple of hours in advance, if at all.

Using the international measuring stick, called the Fujita scale, to assess the tornado's intensity, Sale said our drama came up short in the bigger scheme of the world's extreme weather.

An F5 tornado is the worst, the sort that leaves towns destroyed and people dead. Sale said Canada has never had an F5. The closest we've come in Ontario is the F4 that hit Barrie several years ago.

The last tornado to hit this area was an F1. It severely injured a man in Flamborough last summer when it threw a tree on top of him while he was hunting in the bush off Edgewood Road.

Though Sale and other Environment Canada experts are already calling yesterday's storms tornadoes, it takes a lot more than that to make it official.

First, a severe weather meteorologist must study the pattern of the storm based on eyewitness accounts and, in this case, digital photographs sent by e-mail.

The funnel clouds had barely dispersed from outside his office window when Brent Malseed, an employee at the Canada Centre for Inland Waters near the Burlington Skyway was electronically sending his computerized tornado images to The Spectator and Environment Canada.

"I turned and looked out the window while I was on the phone and I saw it swirling," he said.

"It was black and it went way up. It came down on a bit of an angle."

Grabbing his office's digital camera, Malseed snapped a couple of shots of the funnel cloud through his office window.

The pictures helped Environment Canada evaluate the storm just moments after it hit.

Rob Simpson, a weather service specialist, said the photos showed a tornado just lifting off the

ground.

"When a tornado starts to lift again, it turns back into a funnel cloud," he explained.

He called this a tornado because it was on the ground and did cause damage just before the photo was taken.

"We look for particular patterns of damage," Sale said. "Rotation in the pattern of damage as it's spread across the ground is the key."

The final confirmation that these were indeed tornadoes will come if and when weather specialists from Toronto make the trek to Burlington and Hamilton to survey the scene.

Sale said the experts go to learn more about the twisters "so we can get better at forecasting these beasts."

### *b) CityPulse News at 6pm August 5, 1999*

Anne: THANKS, MARK. ME, TOO. NEXT, WE'RE HEADING DOWN THE Q.E.W. TO THE HAMILTON AND BURLINGTON AREA NEXT WHERE THIS HAS BEEN A DAY OF CLEANING UP AFTER A TORNADO TOUCHED DOWN YESTERDAY. ECOLOGY SPECIALIST BOB HUNTER TELLS US IT WAS A VERY CLOSE CALL FOR THE FOLKS INVOLVED.

Bob: UP UNTIL ABOUT 2 p.m. YESTERDAY AFTERNOON, THIS WAS A TRAILER IN LOST FOREST PARK NEAR HAMILTON. THEN THE WIND HIT, SHATTERING EVERYTHING. IT MIGHT AS WELL HAVE BEEN AN EXPLOSION. THE ONLY THING IS, MIRACULOUSLY, NO LIVES WERE LOST.

New Speaker: WE CAME HOME APPARENTLY 10 OR 15 MINUTES AFTER THE TORNADO WENT THROUGH. AS WE CAME THROUGH THE GATE, WE COULD SEE THAT OUR HOUSE HAD BEEN LEVELLED, AND I THINK I SAID SOMETHING, "OUR HOUSE IS GONE," AND THEN I REALIZED THAT WE HAD LEFT THE DOG AT HOME.

New Speaker: SHE RAN ACROSS THE FIELD THERE AND THEY FOUND HER ABOUT A MILE AWAY. I GUESS SHE JUST KEPT ON RUNNING.

New Speaker: TWO STITCHES IN HER EAR.

Bob: AT THIS HOME JUST NEAR LOST FOREST PARK, THE WIND CAME ALONG AND ACTUALLY GRABBED THAT PLAY SET AND THREW IT RIGHT ACROSS THE YARD. IT ALSO GRABBED AN EAVESTROUGH AND TWISTED IT INTERESTINGLY AND THEN BLEW



RIGHT OVER THERE AND TOOK OFF PART OF THE ROOF ON THE BARN NEXT DOOR. IT CAME IN FROM OVER THERE?

New Speaker: YEAH, WHERE ALL THE STRAW BALES WERE. I LOOKED OUT AND THEY WERE BOUNCING AROUND AND I THOUGHT, "WOW! THAT WIND MUST BE REALLY STRONG." I JUST WAITED AND LOOKED AND BEFORE YOU KNOW IT, IT WAS IN THE BARNYARD, GOING AROUND IN A CIRCLE.

Bob: NOT ALL THE SATELLITES OR COMMUNICATION SYSTEMS OR EVEN COMPUTERS IN THE WORLD COULD GIVE THESE PEOPLE ANY WARNING WHATSOEVER, A LITTLE REMINDER OF JUST HOW VULNERABLE WE ALL ARE. I'M BOB HUNTER IN LOST FOREST PARK FOR "CityPulse."



John Hawkins sifts through debris that was once his trailer home demolished by a tornado yesterday north of Burlington, Ont. No one is known to have been hurt in a swath from Toronto to Hamilton, where funnel clouds were reported to have touched down in the afternoon.

BARRY GRAY/The Hamilton Spectator

# Tornado cuts swath in Ontario, ruins homes but spares people

*Hurt dog only casualty as trailer destroyed 'like it had a bomb in it'*

JOHN SAUNDERS  
*The Globe and Mail, Toronto*

A tornado destroyed a Burlington house trailer yesterday — “just picked it up and blew it up like it had a bomb or something in it” — but the sole occupant, a cocker spaniel named Chelsea, survived.

Alanna Benoy, a 12-year-old Brampton girl visiting the Lost Forest trailer park in a rural corner of Burlington, southwest of Toronto, said she saw the funnel cloud and the havoc it left behind.

“It’s all over the place, stuff back in the woods. There’s a golf course like a mile away and they found pictures and personal letters and stuff over there.”

She said she and her friend, Casey Stinson, 13, retrieved the dog. “It had to get stitches in its back foot and its ear was bleeding a little bit, but it’s okay now, and nobody was hurt.”

Park manager Fred Vandermolén said the 12-by-40-foot trailer be-

longed to John Hawkins, a retired foreman from the Ford Motor Co. of Canada Ltd. plant in Oakville, and his wife Karen, who lived there in the summer.

Speaking by portable phone, Mr. Vandermolén said: “I’m here-at the debris right now. We’re trying to find what we can. It’s total devastation — nothing left, nothing, just some personal belongings, pictures, Tupperware, that’s about it.”

Amazingly, no one is known to have been hurt anywhere in a swath from Toronto’s Exhibition Place to the south side of Hamilton where funnel clouds were reported during the afternoon. Later, rain in thick sheets hit parts of Toronto as powerful thunderstorms moved through the area.

The Burlington tornado was officially verified, while others were considered possible or probable, notably one that tore off part of a roof on Hamilton’s Stone Church Road West.

Leona MacNeil, who lives in the Eleanor Park area, said she could believe it was a tornado. “If you could see the neighbour across the road’s house, it would appear that that might be what happened.”

Part of the roof was gone, she said, and a metal awning on a nearby house was “twisted back up onto the roof, and it’s just sitting up on the roof inside out.”

Another resident, Josie Dirisio, said that part of her neighbour’s roof was gone. “We got his roof in our back yard.”

Elsewhere, siding, lawn furniture, barn roofs and other property were damaged, especially in a 25-kilometre path extending southeast from the Flamborough area, west of Hamilton.

Rob Simpson, a federal meteorologist, said the Burlington tornado was quickly verified because an alert photographer caught it with a digital camera and E-mailed the picture to the weather office.

## Hamm reassure Cape Bre steelwor

*Fair severan  
pensions pr*

Canadian Press,

Cape Breton st... had worried t... sive Conservative... would spell the... were comforted... terday with pren... Hamm, a union...  
“I think the... comfort there... United Steely... said after an h... run-down ste...

Dr. Hamm... ity governm... two of their... Breton, wh... Liberal. Pa... was a pleo... owned Syd... cannot b... money lo... about \$2...

Mr. M... sured th... Tories w... dreds o... debt-ric...

“I thi... the fac... to... sale is... to give...

Dr... contri... and v... and p... Mr... assu... mitr...

“T... is n... exp... Ste... he...

sa... in... it... n... E... I...

sa... in... it... n... E... I...

sa... in... it... n... E... I...

Paul Banks

Plan Borough Review.

905-689-2003 x331

gave PZ damage estimate

Media Form

Aug 7, 1979

Cage Townsend

579-875-2929

Brian  
A stylized handwritten signature consisting of a horizontal line, a wavy underline, and a long vertical stroke extending downwards.

5898x

9

STN-837-5778

Marianne.

Linda Riley Simcoe  
Ret.

STN-426-5710 x136

Cindy & Harry Zebant

905-638-3342

Hwy 6 around Postland

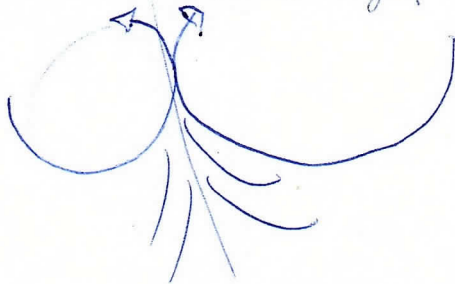
Neil Hunter

\$ 125,000  
Final  
assessment

Cedar bush/Valew

Unbelievable

tree damage.



Leluc

ST9-688-0299

Brian Michiels 30 min.

Chon order? Time? Location?

~~Danger~~ Facing? Movement.

~~Danger~~ Others? Damage?

Permission? w/ reference?

2



Marianne Zahorak sp?

Neil Hunter

Sept  
4

- back half  
of main bar is

gone

- ~~main bar~~

is smaller

bar ~~is~~

flattened

80-  
\$ ~~100~~ 100k

Neil Hunter

Harry Sahorak  
barn damage 9 to  
W

① damage - wasn't raining  
at all

neighbour  
↳

↳ saw two small ahead,  
bigger behind, then  
separated ~ 1:45pm

② name? John McPhail east side

plows upside down

crop damage

garage down

1 path

Clear Creek to Cultus

looks big not so much

dyane@quick.com

②

- random order      Since paper

→ 11:30 am - 11:45 am

→ RRY Langton      Cultus  
near Clear Creek      same

→ land      looking south then east.

→ facing east / biggest end

→ moving east, 1/2 hour!

→ 3 others, funnel clouds on near shore  
skinny

Gage

Suzan Manning, OnTV

416-678-4089

Chris McDermott

WxNet  
▶────────▶

905-566-4811

x296

- cell # 416-~~457-7484~~  
457-7455

256 Parkside Waterdown  
~~Waterdown~~ Centre Rd. S, left

Fire Chief Brad Patton

Flamb. 905 - 689 - 2282

↳ 20 mi. long swath  
of damage  
moving SE.

---

Carlisle

# Lost Forest Park

→ Corner 6th Concr. E  
Melborough town line

940

- border road Burl. & Plann.

John McKay → 416-678-6149

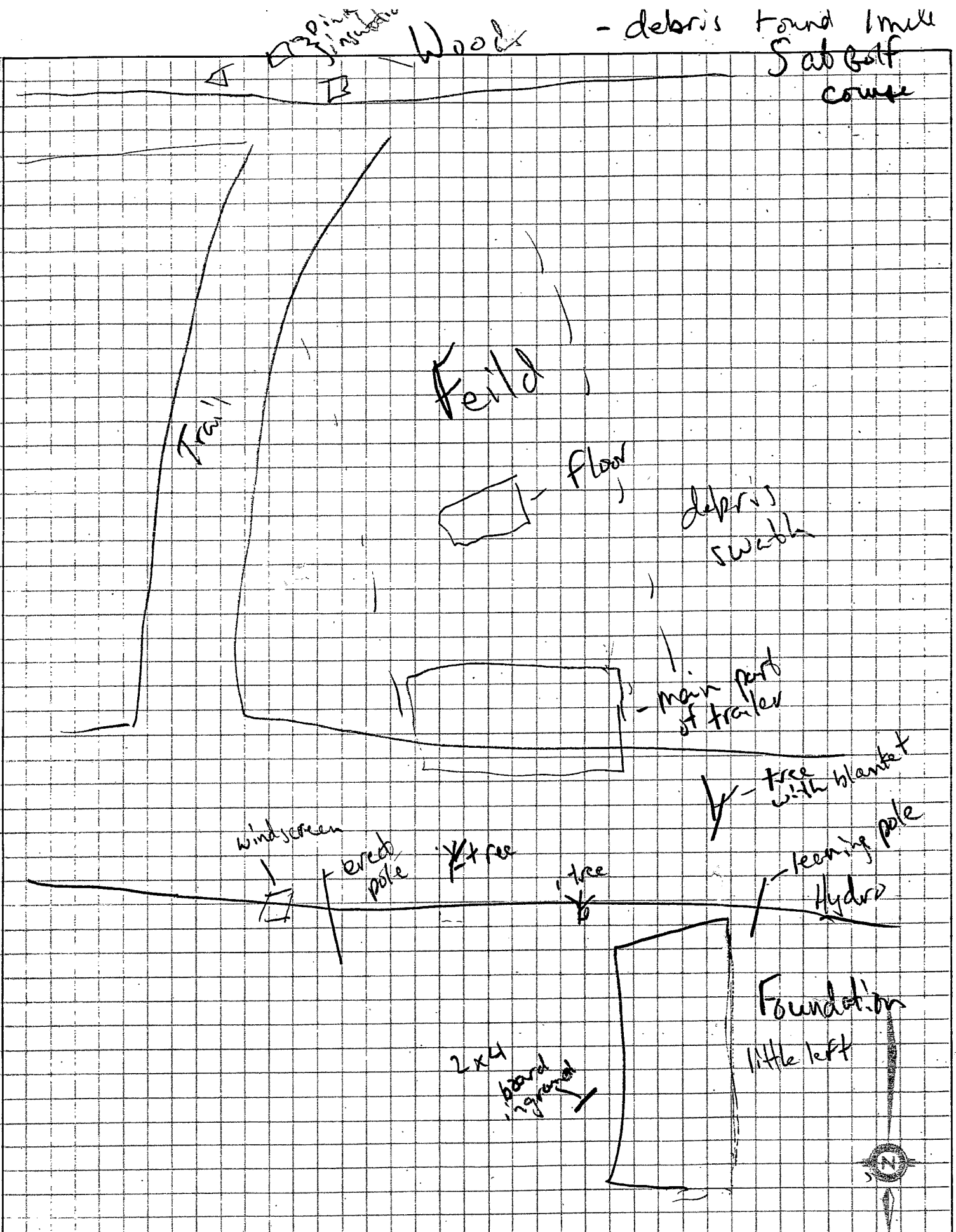


Neha Bhupal  
(Global News)

446-5466.

John Mentek  
Spec.

5263350



- Damage sketch for this location. - Need not be to scale but should indicate numerical dimensions (metric units preferred) and orientation with respect to north. Positions where photographs were taken should be located.

# Doppler - Cell 1

Meso @ 1.5°

first @ 1620Z, 1220 EDT near Elmira

GTGS  $\rightarrow$  ~ 60 m/s

Weakens as it passes NE of Brestlaw @ 1700Z  
(begins to slow up here in 0.5°) (1300 EDT)

strengthens at 1730Z (1330 EDT)  
near Morrisston

GTGS  $\rightarrow$  ~ 30 m/s

strengthens at 1750Z (1350 EDT)  
~ Flamborough Centre

GTGS ~ 60 m/s

over city of Burlington @ 1810Z (1410 EDT)

GTGS ~ 50 m/s, slight 0.5° signature

last evidence over L. Ont. @ 1850Z (1450 EDT)

GTGS ~ 40 m/s, strong 0.5° signature.

3.5° - sig's at 1740-1800, not strong.

Cell 2 - Hann to ST. CATS

3.5° - no signature

1.5° - meso at 1850z (1450 EDT)  
over Ancaster

GTGS  $\rightarrow \sim 50 \text{ m s}^{-1}$

- over SE Hamilton @ 1910z (1510 EDT)

GTGS  $\rightarrow \sim 40 \text{ m s}^{-1}$  but max  
shear in larger meso  $\sim 60-70 \text{ m s}^{-1}$

- over Beamsville @ 1930z (1530 EDT)

GTGS  $\rightarrow \sim 40 \text{ m s}^{-1}$  ~~max~~

signature fades after 1940z

0.5° - weak sig. ALO SE Hamilton

GTGS  $\sim 30 \text{ m s}^{-1}$

weak sig 1940z  $\sim$  Vineland

SITE NO. 1

Property of Gy Silverburg 18:25 Aug 4, 1999  
1941 Valens Rd North, Valens cross-roads with Regional Rd 97

- #8 Facing S-SE (facing towards front of house)
- #9 Facing E (east side of property)
- #10 Facing E-SE (from west side of property)
- #11 Facing NE (from " " " " of house)
- #12 Facing N NE (picture of old board hanging from branch)  
left at 18:45.

- trees down were mostly maple and a butter nut.

Power lines down. Someone had told him they had seen the funnel cloud touch down. He was looking from east window and saw grass blowing from south and trees started flying. It was over in 15 seconds.

SITE NO. 2

Shirley - Hunter: were not home. Neighbor saw funnel and things flying.  
& Neil Hunter. , 1409 Country Rd 97.

- followed creek and then split in two after damaging barn.
- debris spread south approx 100m from barn.
- bent sign on steel post west of house entrance. House on north side of road.
- #13 Facing North - picture of barn - roadside (Silo may have been damaged by roof).
- #14 Facing NW - west barn blown away - part of roof remaining.
- #15 SW - steel bin approx 3SD kg rolled <sup>over</sup> in wind.
- #16 South - debris from west barn with debris lodged in tree ~ 20m high
- #17 S-W - trees blown down from east (cedars)

Site 3

1-800-444-9276

Page 2

Note Linda Crawford, 8th concession (#1084), Flamborough township - train noise heard, branches seen flying.

Valens Conservation

SE  
to Millborough Rd. ~~opposite~~ around house

20 mile  
track

Linda

Linda  
1084  
8th conc.

← Millborough

Hamilton.

Sherman Ave

along escarpment

Upper  
Sherman  
& 5th

End City  
on Mountain

Fender \$150 3rd/old  
Bassman.

416-457-7455 Chris McDermott L&N  
905-566-4811 x296

Joe Shaykenich, verification

Tamara Shepherd Flamborough.  
Neil Hunter Post  
↓  
689-2232



Xfilmusr  
- have to redo even 95's  
- X in extension  
- May 13, 97?



## Spotter Reports, August 4, 1999

**CLASSIFICATION:** Severe Thunderstorm **SOURCE/WATCHER ID:** Contract observer  
**YHM EVENT TIME (UTC):** 17-10 **EVENT DAY:** 4.0 **MONTH:** 8.0 **YEAR:** 1999.0 **EVENT DURATION (HR):** 0.0 **(MIN):** 0.0 **DAY OF THE WEEK:** **EVENT LOCALE:** Stonechurch and Upper Sherman, Hamilton **ASOCTD PUBLIC RGN:** Hamilton-Wentworth **DETAILED DESCRIPTION:** "Shingles off of a roof, small trees down" **INITIAL ASSESSMENT:** YES **SPL WX STATEMENT IN EFFECT ?:** YES **STATEMENT LEAD TIME (HR): (MIN):** **WATCH IN EFFECT ?:** NO **WATCH LEAD TIME (HR): (MIN):** **WARNING IN EFFECT ?:** NO **WARNING LEAD TIME (HR): (MIN):** **TORNADO:** NO **WINDSPEED:** E90 **RAINFALL:** MM **RAIN DURATION:** **HAIL DIAMETER:** MM **HAIL DESCRIPTION:** **EVENT DESCRIPTION:** Wind **Mesoscale ?:** YES **Synoptic ?:** NO **Big Event ?:** NO **Statement Est Hit/Miss:** YES **Watch Est Hit/Miss:** NO **Warning Est Hit/Miss:** NO **Separate Event (30km/30min):** NO **Vetted by:** Kuhny - Duplicate **Vetted date:** 26/09/1999

**CLASSIFICATION:** Severe Thunderstorm **SOURCE/WATCHER ID:** Marianne Zahoruk  
**EVENT TIME (UTC):** 17-30 **EVENT DAY:** 4.0 **MONTH:** 8.0 **YEAR:** 1999.0 **EVENT DURATION (HR):** 0.0 **(MIN):** 0.0 **DAY OF THE WEEK:** **EVENT LOCALE:** 1457 Regional Rd 97 just S of Freelon **ASOCTD PUBLIC RGN:** Hamilton-Wentworth **DETAILED DESCRIPTION:** "Supposed touchdown of funnel cloud." **INITIAL ASSESSMENT:** YES **SPL WX STATEMENT IN EFFECT ?:** YES **STATEMENT LEAD TIME (HR): (MIN):** **WATCH IN EFFECT ?:** NO **WATCH LEAD TIME (HR): (MIN):** **WARNING IN EFFECT ?:** NO **WARNING LEAD TIME (HR): (MIN):** **TORNADO:** POSSIBLE **WINDSPEED:** **RAINFALL:** MM **RAIN DURATION:** **HAIL DIAMETER:** MM **HAIL DESCRIPTION:** **EVENT DESCRIPTION:** Tornado **Mesoscale ?:** YES **Synoptic ?:** NO **Big Event ?:** NO **Statement Est Hit/Miss:** YES **Watch Est Hit/Miss:** NO **Warning Est Hit/Miss:** NO **Separate Event (30km/30min):** YES **Vetted by:** Kuhny - same tornado event (Freelon) **Vetted date:** 26/09/1999

**CLASSIFICATION:** Severe Thunderstorm **SOURCE/WATCHER ID:** Halton Regional Police via MOE **EVENT TIME (UTC):** 17-30 **EVENT DAY:** 4.0 **MONTH:** 8.0 **YEAR:** 1999.0 **EVENT DURATION (HR):** 0.0 **(MIN):** 0.0 **DAY OF THE WEEK:** **EVENT LOCALE:** 4449 Town line W, Burlington **ASOCTD PUBLIC RGN:** Hamilton-Wentworth **DETAILED DESCRIPTION:** "Funnel cloud spotted, trailer overturned and thrown 70 ft and destroyed, hydro pole broken, Phone 905-825-4747 ext 5170 (Caralee Roberts)" **INITIAL ASSESSMENT:** YES **SPL WX STATEMENT IN EFFECT ?:** YES **STATEMENT LEAD TIME (HR): (MIN):** **WATCH IN EFFECT ?:** NO **WATCH LEAD TIME (HR): (MIN):** **WARNING IN EFFECT ?:** UKN **WARNING LEAD TIME (HR): (MIN):** **TORNADO:** POSSIBLE **WINDSPEED:** ? **RAINFALL:** MM **RAIN DURATION:** **HAIL DIAMETER:** MM **HAIL DESCRIPTION:** **EVENT DESCRIPTION:** Tornado **Mesoscale ?:** YES **Synoptic ?:** NO **Big Event ?:** NO **Statement Est Hit/Miss:** YES **Watch Est Hit/Miss:** NO **Warning Est**

**Hit/Miss: YES Separate Event (30km/30min): NO Vetted by: Kuhny - Same tornado event (Freelton) Vetted date: 26/09/1999**

**CLASSIFICATION: Severe Thunderstorm SOURCE/WATCHER ID: Brad Patton, Flamborough Fire Department EVENT TIME (UTC): 17-30 EVENT DAY: 4.0 MONTH: 8.0 YEAR: 1999.0 EVENT DURATION (HR): 0.0 (MIN): 0.0 DAY OF THE WEEK: EVENT LOCALE: Flamborough Twp ASOCTD PUBLIC RGN: Hamilton-Wentworth DETAILED DESCRIPTION: "Possible tornado, 20 mile long swath of damage extending from Valens Conservation Area in a SE direction to Millborough, roofs off of houses/barns, heavy round bails moved, 35' trailer with 2 fridges in it destroyed 905-689-2282" INITIAL ASSESSMENT: YES SPL WX STATEMENT IN EFFECT?: YES STATEMENT LEAD TIME (HR): (MIN): WATCH IN EFFECT?: NO WATCH LEAD TIME (HR): (MIN): WARNING IN EFFECT?: NO WARNING LEAD TIME (HR): (MIN): TORNADO: POSSIBLE WINDSPEED: ? RAINFALL: MM RAIN DURATION: HAIL DIAMETER: MM HAIL DESCRIPTION: EVENT DESCRIPTION: Tornado Mesoscale?: YES Synoptic?: NO Big Event?: NO Statement Est Hit/Miss: YES Watch Est Hit/Miss: NO Warning Est Hit/Miss: NO Separate Event (30km/30min): NO Vetted by: Kuhny - Same tornado (Freelton) Vetted date: 26/09/1999**

**CLASSIFICATION: Severe Thunderstorm SOURCE/WATCHER ID: Unknown EVENT TIME (UTC): 17-35 EVENT DAY: 4.0 MONTH: 8.0 YEAR: 1999.0 EVENT DURATION (HR): 0.0 (MIN): 0.0 DAY OF THE WEEK: EVENT LOCALE: Flamborough ASOCTD PUBLIC RGN: Hamilton-Wentworth DETAILED DESCRIPTION: "Funnel cloud spotted with a brief touchdown." INITIAL ASSESSMENT: YES SPL WX STATEMENT IN EFFECT?: YES STATEMENT LEAD TIME (HR): (MIN): WATCH IN EFFECT?: NO WATCH LEAD TIME (HR): (MIN): WARNING IN EFFECT?: YES WARNING LEAD TIME (HR): (MIN): TORNADO: POSSIBLE WINDSPEED: RAINFALL: MM RAIN DURATION: HAIL DIAMETER: MM HAIL DESCRIPTION: EVENT DESCRIPTION: Tornado Mesoscale?: YES Synoptic?: NO Big Event?: NO Statement Est Hit/Miss: YES Watch Est Hit/Miss: NO Warning Est Hit/Miss: YES Separate Event (30km/30min): NO Vetted by: Kuhny - Duplicate (Funnel Cloud) Vetted date: 26/09/1999**

**CLASSIFICATION: Severe Thunderstorm SOURCE/WATCHER ID: Nancy Stadler-Salt EVENT TIME (UTC): 18-20 EVENT DAY: 4.0 MONTH: 8.0 YEAR: 1999.0 EVENT DURATION (HR): 0.0 (MIN): 0.0 DAY OF THE WEEK: EVENT LOCALE: Burlington ASOCTD PUBLIC RGN: Hamilton-Wentworth DETAILED DESCRIPTION: "Good sized waterspout or funnel cloud NE of CCIW." INITIAL ASSESSMENT: UNCONFIRMED SPL WX STATEMENT IN EFFECT?: YES STATEMENT LEAD TIME (HR): (MIN): WATCH IN EFFECT?: NO WATCH LEAD TIME (HR): (MIN): WARNING IN EFFECT?: YES WARNING LEAD TIME (HR): (MIN): TORNADO: POSSIBLE WINDSPEED: ? RAINFALL: MM RAIN DURATION: HAIL DIAMETER: MM HAIL DESCRIPTION: EVENT DESCRIPTION: Tornado Mesoscale?: YES Synoptic?: NO Big**

**Event ?:** NO **Statement Est Hit/Miss:** YES **Watch Est Hit/Miss:** NO **Warning Est Hit/Miss:** YES **Separate Event (30km/30min):** NO **Vetted by:** Kuhny - Same tornado event **Vetted date:** 26/09/1999

August 4<sup>th</sup>, 1999  
Burlington Compass

- highway-visible
  - appears to be traffic footage or monitoring or something (roadcams)?
  - raining
  - shift views, now sunny cars... cars
  - scud visible below cloud
  - back to opposite view
  - back to scud side... tornado visible!?
  - dark tornado, **I** shape.
  - appears stationary
  - straightens out **I**
  - top of screen says: 003 eastport  
Hold drive
  - 08-04-99  
19:19:58
  - tornado dissipating or becoming scudlike again
  - shift view back to traffic
  - traffic, traffic, traffic
- tornado was first visible at: 14:18:12 (fully formed)  
- dissipated at: 14:20:35

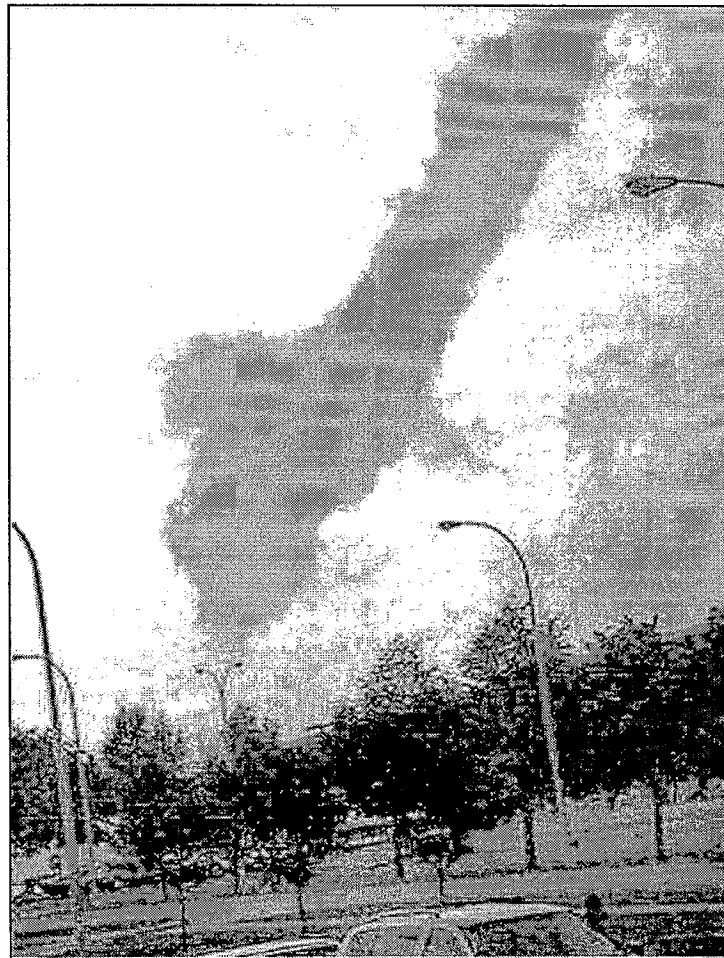
# Canadian Tornadoes, Waterspouts, Funnel Clouds and Imposters

---

I have started to put this page together to show various images of tornadoes in Canada and discuss their nature. Since I have yet to actually see one of these beasts in person (not that I haven't tried!), the photos are from various sources and are properly credited. Please credit the appropriate photographer if you happen to use any of these images.

---

August 4, 1999



Tornado in Burlington, Ontario as photographed by Brent Malseed from the Canadian Centre for Inland Waters. This tornado occurred in association with a thunderstorm cell with a well-defined

## Tornadoes of Southern Ontario

Page 2 of 4

velocity couplet indicative of a mesocyclone. Interestingly, the radar echo tops on this storm ranged between 8 and 10 km - definitely a low-topped supercell! This tornado produced F2 damage earlier in Flamborough and north of Burlington.

