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TORNADO PROJECT SUMMARY SHEET

1. DATE AND TIME Aug 14, 1987 1500-1600 CDT

2. LOCATION OR PATH (attach map) Morris, Man.

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;

9. LIST ANY ASSOCIATED PHENOMENA
(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.

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Winnipeg Free Press
Saturday, August 15, 1987
Pages 25-44

TORNADO ALLEY

Red River Valley high risk area for devastating twisters

By Morley Walker

THE ODDS OF a tornado striking Winnipeg are higher than anywhere else on the Prairies.

And if a killer twister similar to the one that struck Edmonton touched down here, Winnipeggers would get only a few minutes warning to duck and cover.

"It's fair to say that the Red River Valley is a northern extension of Tornado Alley in the U.S.," says Mike Balshaw, regional director for the atmospheric environment service of Environment Canada.

Except for a small portion of southwestern Ontario, the Red River Valley has the most tornadoes in Canada, says the Winnipeg-based meteorologist.

"Not every tornado can be forecast in advance," says Balshaw. "They're spawned so quickly from thunderstorms that it's scientifically and technically impossible to give more than probably a few minutes warning."

Balshaw says the lifespan of a tornado — the whirling, funnel-shaped vortex that descends from storm clouds — is less than half an hour and often as short as a few minutes.

Local experts in weather forecasting and disaster planning think Winnipeggers need to be better acquainted with safety precautions involving tornadoes and their aftermath.

Prevent deaths

"You can't prevent tornadoes, but you can prevent deaths," says Henry Eckert, co-ordinator of



regarding storage of hazardous substances.

Phenomenon

Here in Winnipeg, the city's emergency plans and organizations committee, set up in 1980, would co-ordinate response to a tornado disaster.

Buildings in Winnipeg are constructed to standards established by the National Building Code, says Rawle Ramdwar, the city's structural engineering planning examiner.

But the code "pays more attention to earthquakes historically than tornadoes," he says.

"Cumulatively a lot more damage has been done in the last 50 years by tornadoes than earthquakes . . . Money has to be set aside to study this phenomenon."

Natural winds

We needn't worry, however, that the Richardson Building will topple over at the first gust of high wind. Ramdwar says it's impossible for natural winds, tornadoes included, to destroy highrise apartments and skyscrapers, which for reasons of their height, are built to withstand enormous pressures.

Houses here are built to "wind reference speed" specification of one in 10, or winds that occur statistically once every 10 years, says Ramdwar. Higher winds would cause the cladding to fly off and the beams to vibrate. The structure won't collapse until it meets winds that occur on average once every 30 years.

Structures labeled by the code as "post-disaster buildings" — hospitals, airports, fire stations — are built to to a wind reference speed of

Repor under in Hai

By Pamela Co
Boston Globe

PORT-AU- Haiti — hostility ha between the mili ernment and the corps, a motley a slim news bullet watt radio statio pet each new s and corruption al far more passion sionalism.

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Half a dozen early July, witne curity forces hav direction of journ ing antigovernm here.

Two Haitian re been taken to bullet wounds, tained for three d have smashed c ment and dest books.

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Balshaw says the lifespan of a tornado — the whirling, funnel-shaped vortex that descends from storm clouds — is less than half an hour and often as short as a few minutes.

Local experts in weather forecasting and disaster planning think Winnipeggers need to be better acquainted with safety precautions involving tornadoes and their aftermath.

Prevent deaths

"You can't prevent tornadoes, but you can prevent deaths," says Henry Eckert, co-ordinator of Manitoba's Emergency Measures Organization.

"One of the problems is that people say, 'It can't happen to me,' " says EMO's communication's co-ordinator Cindy Stevens.

"As devastating as a tornado is, there's a small probability of any person experiencing it," says Balshaw. "But even with that remote possibility, it's important that people not panic and take reasonable measures to protect themselves."

According to Environment Canada statistics, Manitoba has averaged six tornadoes a year since 1960. But there seems to be a recent upward trend, probably due to improved reporting techniques. In 1978, 15 tornadoes were reported, 17 in 1984.

So far this year, nine twisters have struck Manitoba, two of those in Winnipeg, both on July 6. Tornado season is generally considered to run from June through August.

The last fatalities in Manitoba caused by a tornado were in 1977 in Rosa where three people died. The worst tornado in Canadian history killed 36 people in Regina on July 1, 1912.

On average, each 10,000-square-kilometre area in Manitoba gets one tornado annually, says Richard Raddatz, a scientific services meteorologist with Environment Canada in Winnipeg.

This is roughly twice the rate of the area surrounding Edmonton, but one-quarter the rate of such high-risk southern U.S. states as Oklahoma, Missouri and Kansas, known to meteorologists as Tornado Alley.

In southern Manitoba, Raddatz says, the likelihood of any seven-square-kilometre area receiving tornado ground damage is .05 per cent annually or once every 2,000 years.

"The odds of being hit by a tornado, although they're very small, are greater than winning the big prize in a lottery," Raddatz says.

Contrary to popular belief, a tornado is every bit as likely to strike Portage and Main as a trailer park on the outskirts.

"But your suburban areas are larger than your inner core, geographically," says Balshaw. "When I think of it, I haven't heard of a downtown urban area getting totally smashed by a tornado, even in the U.S."

Although various government departments distribute tornado-information leaflets and the weather office has well-defined gradations in weather warnings, Manitobans are generally ill-informed about what steps to take in case of weather emergency, says EMO's Eckert.

"In the U.S., where they've had a number of serious experiences, when the weather office says tornado warning, people know to take to their basements or to their tornado shelters," says Eckert. "Experience is the best teacher."

Bitter experience taught officials of Barrie, Ont., the value of preparedness after a tornado killed 12 people in the area in May, 1985.

"If we hadn't had an emergency disaster plan, we'd have been in hellish straits," says Ray Allen, executive assistant to Barrie's city administrator. "But during that disaster, we found there were some holes in our plan."

The city has since bought a "mobile operations control centre" which can be driven to any disaster site, says Allen, and top city officials now carry pagers to be used in the event of an emergency.

Planners also recognized the importance of setting up a reception area for volunteer away from the disaster site — to keep gawkers and the media from impeding rescue work, Allen says.

The city made no changes to building-code bylaws, Allen says, but has tightened up regulations to destroy highrise apartments and skyscrapers, which for reasons of their height, are built to withstand enormous pressures.

Houses here are built to "wind reference speed" specification of one in 10, or winds that occur statistically once every 10 years, says Ramdwar. Higher winds would cause the cladding to fly off and the beams to vibrate. The structure won't collapse until it meets winds that occur on average once every 30 years.

Structures labeled by the code as "post-disaster buildings" — hospitals, airports, fire stations — are built to to a wind reference speed of one in 100, Randwar says.

Still, "the standards are not designed to cope with tornadoes," he says. "Certainly people will be taking a serious look at the codes, because no one would have thought Edmonton or Barrie could have suffered the disasters they did."

As the Edmonton tragedy showed, mobile homes remain most vulnerable to tornadoes. But local trailer parks take virtually no precautions to protect their residents, other than locating themselves behind a row of trees.

Trailer straps

Ron Deneka, the resident manager of Highway Gardens Trailer Park in Lockport, says many American trailer parks have installed concrete tornado shelters, but none have been built here.

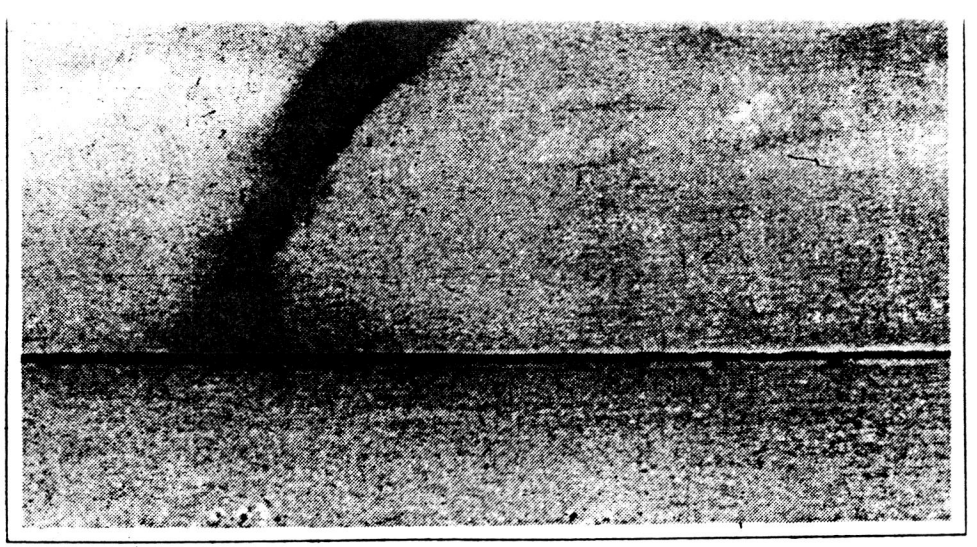
As well, he says, U.S.-built mobile homes come equipped with trailer straps — thick steel belts that wrap around the trailer and anchor it to the ground with five-foot augers.

No Canadian-built trailers come with the straps, he says. Of the 109 trailers at Highway Gardens, three have straps, says Deneka, but none uses them.

"It's the same old story. You can lead a horse to water, but you can't make him drink," says Deneka. "A lot of people don't think it can happen, and when it does, they call it a freak."

The Pineridge Village Mobile Home Park on Hwy. 59 near Birds Hill was hit in 1983 by a tornado which demolished two trailers and damaged several others. Since then no steps have been taken to batten down the hatches.

See **TORNADOES** page 27



Time to head for lower ground

Here's what to do if you see a tornado or if a tornado warning is issued for your area:

- ☐ Seek shelter in the basement, if your home or apartment has one. If not, go into an interior hallway or room without windows on the main floor. The side of the building facing away is generally safer than the one facing a tornado.
- ☐ If you're on a highway, don't stay in your car. Get out into a ditch or a low-lying area. If no shelter can be found, hang on to a small tree or shrub.
- ☐ Don't stay in a mobile home. Get outside into a low-lying area.
- ☐ Avoid buildings with large areas of unsupported roof, such as arenas, barns or supermarkets. If caught in such a building, head for the lowest floor, an inside hallway or small room, or get under something sturdy.
- ☐ You can't outrun a tornado. Move away from the tornado's path at a right angle.

Manitoba's Emergency Measure Organization recommends taking these precautions when a storm warning is issued.

- ☐ Have a battery-powered radio and flashlight on hand in case of a power failure.
- ☐ If time permits, secure shutters, doors, windows and outdoor items such as patio furniture.
- ☐ Disconnect sensitive electrical appliances such as TVs, stereos and computers.
- ☐ If you are caught outdoors, seek shelter away from trees and free-standing objects.

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Pilots fear wind shear

WIND SHEAR AT WORK

discriminatory because Legion halls and Liquor Control Commission stores were allowed to stay open between 6:30 p.m. and 7:30 p.m. In 1984, despite a provincial survey showing 60 per cent of the population favored the status quo, the government ended the practice.

☐ In 1979, the MHA won a battle allowing bars to serve beer in pitchers.

☐ LCC wine-pricing policies no longer limit the markup on cheap wines as once was the case.

☐ The association successfully argued that Regulation 15, which stopped a hotelier who sold his business from owning another in Manitoba for five years, discriminated against experienced people.

☐ The recent change allowing alcohol to be served during specified hours on Good Friday and Remembrance Day