



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE
Greater Cincinnati Airport
Cincinnati, Ohio 45275

Date: April 19, 1974

Reply to
Attn of: MIC, WSO, CVG

Subject: Tornado Outbreak April 3 - 4, 1974

To: WFE 8x3, ERH

I. Summary of Tornado activity in the WSO CVG area of responsibility:

Tornadoes #1 and #2 (Twin tornadoes):

Apparently the same parent thunderstorm that spawned the tornado outbreak in the Louisville area moved northeastward into west-central Switzerland County four miles south of Pleasant, Indiana at 5:10 pm EDT. A tornado path was evident from east central Jefferson County into Switzerland County. The tornado stayed on the ground through Bennington at 5:13, Bear Branch at 5:16 to just east of Milton at 5:20 crossing Route 50 some 2 miles west of Aurora. At this point the funnel began to lift and was back in the cloud just north of Aurora. A funnel was sighted from the Kentucky side of the Ohio River bouncing along the Indiana foothills a mile northeast of Aurora at about 5:20 pm EDT. The storm then tracked eastward crossing the Ohio River and entered Kentucky at approximately 5:25 pm.

Along the entire route through Switzerland, Ohio, and Dearborn Counties, Indiana eye-witness reports were plentiful and many indicated two and a few three funnels at a time. Damages indicated an occasional area where two paths were easily distinguishable.....paralleling each other $\frac{1}{4}$ to $\frac{1}{2}$ mile apart. When two paths were evident, the one to the left (north) appeared much wider than the other.....width 300 yds. for the larger tornado.

About 3 miles southwest of Milton two tornadoes struck.....the larger flattening two homes $\frac{1}{4}$ mile apart and attendant outbuildings and sucking the water from a farm pond. In the one home multiple injuries occurred while in the other, none. The reason was obvious.....the man in the latter home had heard warnings at work in Cheviot, Ohio and had taken time off from work early to be there to protect and prepare his family.... when the storm hit, his wife and children were under a mattress piled in one corner of their bedroom. He was caught in the barn but managed to grab hold to a heavy sunken trough....he said his legs were lifted off the ground in a flag-like manner as he desperately held his grip. He noted difficulty in breathing as the storm passed over (not because of wind blowing in his face), a very warm or hot sensation and the locomotive sound. The storm was over in seconds....he then noted that the funnel stayed in the valley.....flip-flopping around for a couple minutes before moving on. The family in the other house was not aware of the warning.....was unprepared....and as a result sustained hospitalizing injuries. This storm was preceded by one inch hail.

A refrigerator and stove were carried into a creek a quarter mile NE of the first farm.

The storm continued as occasionally two funnels to a point about a half mile southeast of Milton. Then it followed a single track to Rt. 50 flattening barns and homes along the way and cutting a 300 yd. swath through forested areas with a counter-clockwise rotation occasionally although primarily straight-line damage was observed. Across Rt. 50 the funnel caught a roof and a few tree-tops before lifting back into the cloud.

Jim Theirotff of Belleview, Ky. watched the tornado as it danced down the Dearborn County, Ind. hills, mostly aloft. The single funnel then tracked eastward across the Ohio River through a gravel pit $\frac{1}{2}$ mile north of Belleview....still primarily aloft with only a few tree tops knocked off. It then moved east across an open field before starting up a hillside where it touched down. A farm home and outbuildings were badly damaged.....this was about $\frac{3}{4}$ mile inland from the Ohio River and just north of Route 18.

The track then followed the ridge paralleling Rt. 18 to Woolper Road (about $\frac{1}{2}$ mile north of Rt. 18 and 3 miles east of the Ohio River) to a Mr. Anderson's home where a couple of barns were downed and a house destroyed as well as trees flattened at about 5:25 to 5:30 pm EDT. The tornado then moved east of the Anderson farm a half mile to a Mr. Hogan's farm where two barns and an equipment shelter were flattened.....Mr. Hogan saw the approach of the storm and tried to flee in his truck. A barn flew across the road in front of him, but he luckily avoided having the truck flipped and escaped injury.

The storm then tracked $\frac{1}{2}$ mile east of Hogan's farm to Mr. Elliott Kirby's (approx. $2\frac{1}{2}$ miles WSW of Burlington). Heavy damage again occurred, primarily to the outbuildings with the center of the storm just north of his home. Next hit was Mr. Knight's farm on Idlewild Rd., just north of the Easton Rd. intersection. He was caught in his barn feeding his cattle when the tornado hit. Three head of cattle were sucked from the barn and when the roof of the barn went, Mr. Knight tried to run for the house. He was immediately knocked off his feet and only hanging onto a fence post saved his life. He was quite battered.....he also noted a hot feeling and an inability to breathe as the storm passed overhead. Many trees were down as well as the barn. Mr. Knight saw two funnels, one much smaller than the other. The two funnels then converged into a single large funnel before hitting his barn.

At a point just north of the Knight farm, the tornado lifted and changed direction moving north and next setting down on the Ed Peel farm where a solid path of destruction about 200 yds. wide was visible. The Peel home and one large barn were destroyed along with a large travel trailer. Mr. Peel's 3/4 ton truck was rolled into a nearby field and smashed. Nothing was left of the trailer except a twisted iron bed. Mr. and Mrs. Peel noted a calm and sudden increase in temperature before the storm hit. The storm then moved NNE through Bullittsville flattening a store and several homes. Two older people and a patron in the store were tossed behind a counter but walked out uninjured after the storm. Directly across from the store at Mrs. Charles Engle's home, her son-in-law heard the warnings and was watching for the storm when it appeared on the horizon. He warned the others in the house and they barely descended into the basement when the storm hit, totally destroying the home and overturning a car.

The tornado tracked north, again two tracks, one large one and one small, were evident. The solid track was evident from the Engle home NE to Northbend Rd., where a Mr. Morris lost his home, barns, and cattle.....barely escaping with his life when caught in the storm he fell into a ditch and clung to tree roots. He was buried by debris, but incurred only minor cuts and bruises. In this area, the explosive effect of the tornado was evident.....two new brick homes were empty shells.....all furniture, windows, etc. gone, sides partially standing. This point being approximately 4 miles NW of the Greater Cincinnati Airport. Again twin tornadoes were evident as two paths $\frac{1}{2}$ to $\frac{3}{4}$ miles apart were noted.

The cell then moved along Tanner Rd. to a crest of a ridge overlooking the Ohio River. Here the cell split with a small tornado tracking downhill flattening trees and homes and then lifting as it crossed Route 8 clipping the tops of trees and stripping a couple roofs before setting out northward across the Ohio River. The other leg of the storm was larger (again to the left) and tore down the hillside facing north.....flattening large trees and homes in its path.....destroying the Morehead Marina which had 200 boats stored, averaging \$25,000 in value. Cars were upturned.....a home was shifted completely off its foundation.....another was lifted and dropped into the Ohio River. Destruction of this area was complete.

The tornado was in sight of the CVG WSO office from approximately the Peel home on, (about 5:35 pm EDT). NWS observers noted only a single large funnel, but eyewitness reports and damage paths indicate the likelihood of two. The larger of the two tornadoes tracked north across the Ohio River into Saylor Park...hitting there about 5:45 pm EDT paralleling the Ohio River about a mile

along Route 50 before heading NNE over the hill. Complete devastation along the 300 yd. path was noted with a $\frac{1}{2}$ to $\frac{3}{4}$ mile wide total damage path. The smaller tornado hit a few tree-tops $\frac{1}{4}$ mile east of the primary path along Route 50 and again lifted back into the cloud.

The subsequent destruction as the storm moved through Sayler Park and NNE along South Rd. $1\frac{1}{2}$ miles southwest of Mack was indescribable. Homes on slabs had disappeared.....only the slab remaining. A pickup truck was carried a half block in the air over five homes before being smashed to the ground on the other side of the street. Complete devastation occurred along much of the 300 yd. path. Heavy damages continued from the point of Bridgetown Rd. and the Van Blaricum Rd. NE-ward across Taylor Rd., Ebenezer Rd., Wesselman Rd. to I-275. The storm then started to weaken with only minor damage at the intersection of Race and West Fork.

Tornadoes #3 and #4

These tornadoes were indicated as a possible hook on the Cincinnati radar and watched closely along with other developing storms until a change in movement and a definite hook configuration at 4:13 pm instigated a tornado warning for Franklin County valid at 4:20 pm EDT. The tornado entered Franklin Co. at Enochsburg at 4:25 pm EDT and tracked NE-ward through Hamburg. Many homes and buildings as well as large forested areas were completely destroyed along this 200 to 300 yd. path. In Hamburg at 4:30 pm EDT a parish, church, and school, all brick, were completely destroyed.....leaving a huge pile of bricks. Earlier a church had been destroyed in Enochsburg.

The start of the path was actually noted well into Decatur Co. Due to the time pressures and still many counties under CVG responsibility to cover.....the NWS investigating team from CVG only went into Decatur Co. as far as a mile west of New Point..... the track in evidence from that point northeastward. Again twin tornadoes were mentioned by many eyewitness persons and double tracks were in evidence. Also the locomotive sound and counter-clockwise circulation were noted. The last funnel lifted back into the mother-cloud about two miles south of Laurel. Warnings had not reached this county in time.....the time interval of actual warning transmission to tornado occurrence was less than 15 minutes. However, the warnings were in advance and watches had been out earlier. The warning was issued strictly on the basis of the hook echo appearances on radar at WSO CVG. Two fatalities and nine injuries were recorded in Franklin Co..... mostly in Hamburg. The two fatalities were a mother and child living in a trailer in Hamburg.....which was lifted across a street and smashed to the ground. The mother and child were thrown to their deaths against a tree.

These tornadoes (primarily one, but another occasionally in evidence) had a track approximately 10 miles long in Franklin Co.....a hit and skip pattern but a fairly steady line of destruction easy to follow. Tornado intensity again varied widely from point to point but definitely was at the Fujita #5 level in Hamburg.

Tornado #5

This tornado developed over Elmwood Place, just west of I-75 and 13 miles NE of CVG. It formed over Mill Creek valley at 5:30 pm with tree and roof damage in evidence. The tornado then moved NE over the Roselawn area with roof damage at the Valley Shopping Center. It then went aloft until touching down again in the southwest part of Blue Ash on Waxing Way Rd. at 5:40 pm EDT where major tree damage and mostly minor roof damage occurred. One individual (Ed Laser, volunteer fireman) interviewed felt there were possibly two funnels and heard the locomotive sound..... the two small funnels then converged into a single large one. The storm was mostly aloft possibly because of the lower elevation, once it hit the higher part of Blue Ash it again touched ground leveling trees.....retreating again into the cloud at the bluff and staying aloft for three miles.

At the southeast corner of Sharonville it again touched down..... There was some evidence of two funnels at this point, but it was rather hard to determine positively.....the first evidence off Creek Rd.....the second off Cornell Rd. Uncertainty warrants the classification of a single funnel here. Trees were down, a few homes destroyed, and roofs damaged. At the Pittsburgh Plate Glass Co. on Grooms Rd. the new buildings were untouched, but many large trees were down. The Schmidt Co. roof had collapsed over half of the building with 20 persons inside.....all unhurt.... no locomotive sound was heard.

This storm broke up northeast of Sharonville near Sharon Woods at 6:00 pm EDT.....just south of I-275 and a little to the west of I-71. The path was approximately 10 miles long and 150 - 200 yds. wide with a skipping pattern all the way. Damage was not as severe as the previously noted storms, but still definitely tornadic.

Tornado #6

First evidence of this storm touching down was south of West Chester Rd.....approximately $2\frac{1}{2}$ miles NNW of the intersection of I-71 and I-275 or 24 miles NE of CVC.....at about 5:30 pm EDT, almost simultaneously with tornado #5. It then moved into Sherman Terrace, a subdivision off Snider Rd., about 4 miles SW of Mason. Pisgah (two funnels evident) was hard hit.....both areas with numerous homes exploded outward and flattened. A 150 yd. wide path for 6 blocks in Sherman Terrace. The tornado stayed mostly on or above the ground through the eastern side of Mason in Warren Co. A Thriftway store in south Mason was destroyed as well as several apartment houses. On a path from Sherman Terrace to Manhasset Village, four power towers were downed....laying in a clockwise pattern. The funnel tracked slowly according to eyewitness reports taking 30 minutes to move northeast of Mason. Baseball sized hail and the locomotive sound were noted. The tornado touched down further northeast toward Lebanon around 6:10 pm before disappearing.

Two policemen cruised under the funnel by mistake.....temperature rose to 100° in the car and they said it was deathly quiet. They said the main funnel was 500 ft. above the ground....black at the top....white at the bottom....debris wrapping up in the funnel was visible on the outside.

Tornado #7

This tornado occurred along Wheat Ridge Road about 4 miles north of West Union in Admas County, Ohio. The storm hit about 1 mile NW of Dunkinsville and moved NE across Route 41 two miles south of Jacksonville. It continued northeast crossing Rt. 781 about $1\frac{1}{2}$ miles east of Jacksonville where it lifted. At least five homes were destroyed along this $4\frac{1}{2}$ mile long and 150 yd. wide track. One woman was killed and 5 injured.

The time of occurrence was around 8:00 pm EDT with no warnings in effect. Power was still out at the airport. About \$500,000 damage was reported. The storm was intense but short-lived and probably impossible to warn for.....except that with radar a severe thunderstorm warning might have been issued earlier on the parent storm.

II. Recap of Warnings and Public Reactions

A tornado warning was issued for Butler (Pisgah) and Warren (Mason & Lebanon) counties at 4:00 pm EDT valid until 5:00 pm EDT based on hook echoes. A tornado warning was issued for Boone County, Ky. and Hamilton Co., Ohio at 4:05 pm EDT valid until 5:15 pm EDT. A tornado warning for Switzerland, Ohio, and Dearborn counties in Indiana; Hamilton and Clermont counties in Ohio; and Boone County in Ky. based on hook echoes was issued at 4:45 pm EDT valid until 5:45 pm EDT. Power at CVC went out at 5:40 pm EDT.

With tornado watches and warnings beamed over the local radio and TV for hours in advance all areas were given ample warning. Warren County and the southeast corner of Butler County (Pisgah) were not actually covered by a warning at the time, but were in line with counties under warnings directly SW and had heard that severe weather was in the area. All interviewed in these counties were satisfied that they had been forewarned and the minimal death count attests to this.

In the Cincinnati area warnings were the only answer to the question so many people asked....."How could a storm do this and still only two persons be killed?" Practically everyone interviewed along this storm track from Switzerland Co., Indiana to Cincinnati had heard the tornado watch and warnings and were on the alert for the storm. WSS Ivan Winterberg gave a blow by blow description of the tornado over northern Boone Co., Ky. and Hamilton Co., Ohio over radio station WCKY between 5:35 pm EDT and 5:45 pm EDT. Television station WCPO, Channel 9, located in western Cincinnati set cameras on its roof and televised the tornado live as it tracked into Sayler Park and northward. The Air Raid sirens had been sounded twice over Cincinnati at 4:05 and 4:45 pm EDT alerting the Cincinnati populous for the first time in history via this means. With the total destruction displayed, warnings by the NWS saved many lives, undoubtedly in the hundreds. People were in cellars, behind sofas, in closets, under beds, in ravines, and halls of large well-constructed brick buildings when the storm hit. The community was warned in advance and prepared itself.

Warnings were transmitted in four (4) primary ways:

- (1) NOAA Weather Wire
- (2) NAWAS (Indiana, Kentucky, and Ohio)
- (3) Via direct hook-up with the Hamilton Co. Police Communications Center when the warnings were distributed immediately to law enforcement, Civil Defense and hospitals over the entire Cincinnati area at one time.
- (4) Via telephone in the single case of Mr. Winterberg and Station WCKY and the call to Station X in Cincinnati to activate the sirens.

III. Abbreviated Tornado Summarization:

Tornado #1 and #2

Time of occurrence - approx. 5:10 - 5:50 pm EDT (continuation of SDF tornado)
Movement - Avg. 250°/55 mph
Width - 200 - 300 yds. (avg. 250 yds.)
Length of Path - 36 miles in CVG area
Warning issued at 4:05 and 4:45 pm EDT valid until 5:45 pm EDT (Hook echo)
FPP - 543
Fatalities - 2 Injuries - 230 Damages - \$49,300,000

Tornadoes #3 and #4

Time of occurrence - 4:25 - 4:40 pm EDT
Movement - Avg. 220°/35 mph
Width - 200 - 300 yds. (avg. 250 yds.)
Length of Path - 8 miles
Warning issued at 4:20 pm EDT valid until 5:20 pm EDT (hook echo)
FPP - 523
Fatalities - 2 Injuries - 9 Damages - \$800,000

Tornado #5

Time of occurrence - 5:30 - 6:00 pm EDT
Movement - 230°/approx. 20 mph
Width - 150 - 200 yds. (avg. 175 yds.)
Length of Path - 8 miles
Warning issued at 4:05 and 4:45 pm EDT valid until 5:45 pm EDT
FPP - 322
Fatalities - 2 Injuries - 39 Damages - \$10,000,000

Tornado #6

Time of occurrence - 5:30 - 6:10 pm EDT
Movement - 230°/approx. 20 mph
Width - 150 yds.
Length of Path - 12 miles
Warning issued for areas S & W 4:05 - 5:45 pm EDT (none actually out for this specific area)
FPP - 432
Fatalities - 0 Injuries - 48 Damages - \$18,790,000

Tornado #7

Time of occurrence - 8:15 pm EDT
Movement - 250°/30 mph
Width - 150 yds.
Length of Path - 5 miles
Warning not issued
FPP - 322
Fatalities - 1 Injuries - 5 Damages - \$500,000