



National Weather Service

Storm Data and Unusual Weather Phenomena



September 2004

| Location | Date | Time Local/ Standard | Path Length (Miles) | Path Width (Yards) | Number of Persons Killed | Number of Persons Injured | Estimated Damage Property | Estimated Damage Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------------------------------|---------------------------------|------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------------------------------|---------------------------------|------------------------------|--------------------|

OHIO, North

OHZ033

Mahoning

| | | | | | | | | | |
|-----------|----------------|--|--|--|----------|----------|-------------|--|--------------|
| 08 | 1800EST | | | | | | | | |
| 09 | 2200EST | | | | 0 | 0 | 250K | | Flood |

Heavy rains associated with the remnants of Tropical Storm Frances caused widespread urban and lowland flooding in Mahoning County. Between two and three inches of rain fell on much of the county by late evening. Dozens of roads in the county had to be closed because of flooding. Hundreds of homes in the county experienced basement or nuisance flooding. Flood waters in some areas were reported to be as much as two feet deep.

**Trumbull County
Countywide**

| | | | | | | | | | |
|-----------|----------------|--|--|--|----------|----------|-------------|--|--------------------|
| 08 | 2120EST | | | | | | | | |
| 09 | 0500EST | | | | 0 | 0 | 4.2M | | Flash Flood |

Heavy rains associated with the remnants of Tropical Storm Frances caused extensive flooding in Trumbull County. The worst flooding was reported in the eastern and central sections of the county where up to four inches of rainfall had fallen by late evening on September 8th. The rains continued into the 9th with another two to four inches reported in some areas before the rain finally ended around daybreak. Rainfall totals from the event included: 3.36 inches at Mosquito Creek State Park; 3.60 inches at Newton Falls; 3.85 inches in Leavittsburg; 4.45 inches at the Youngstown-Warren Regional Airport in Vienna Township and 9.40 inches at Brookfield. The Cortland area was especially hard hit by flooding. Between 20 and 30 families had to be evacuated from their homes around 2:30 a.m. after flood waters from Walnut Run rose to nearly four feet in depth in their neighborhood. A total of 118 homes were damaged by flooding in Cortland. Several roads and culverts were also washed out in the area. Flood waters along Tournament Trail and Old Oak Drive exceeded the 100 year flood plain. Brookfield Township was also hard hit as several small streams went into flood washing out a couple roads and forcing the closure of several more. To the south, Little Yankee Creek and Mud Run Creek went into flood in Hubbard damaging many homes and businesses along Main Street. Many other roads were washed out or damaged elsewhere in the county. A total of 309 homes were directly damaged by flash flooding in Trumbull County. Hundreds of additional homes and businesses experienced basement or nuisance flooding.

**Stark County
Southeast Portion**

| | | | | | | | | | |
|-----------|----------------|--|--|--|----------|----------|-------------|--|--------------------|
| 08 | 2130EST | | | | | | | | |
| 09 | 0400EST | | | | 0 | 0 | 1.2M | | Flash Flood |

For the second time in less than two weeks, heavy rains caused significant flooding in the southeastern corner of Stark County. Rain associated with the remnants of Tropical Storm Frances began early on September 8th and increased in intensity during the evening hours. The rain continued into the early morning hours of the 9th and finally ended an hour or two before daybreak. Storm total rainfall amounts included: 2.08 inches at North Lawrence, 2.32 inches at Genoa and 3.08 inches at Alliance. Similar to the August 28th flash flood event, heavy rains over Columbia County contributed to the severity of the flooding. Up to 9 inches of rain was reported over the headwaters of Sandy Creek in Columbia County. The creek rapidly rose during the late evening hours of the 8th and early morning of the 9th. Over 60 homes and business were heavily damaged in Minerva after the creek left its banks. A couple dozen people had to be rescued or evacuated from their homes. The water treatment plant in Minerva sustained over \$100,000 in damages. Many roads in the southeast corner of the county were washed out or had to be closed because of flooding. Dozens of additional homes sustained damage from basement or nuisance flooding.

**Mahoning County
Countywide**

| | | | | | | | | | |
|-----------|----------------|--|--|--|----------|----------|-------------|--|--------------------|
| 08 | 2200EST | | | | | | | | |
| 09 | 0300EST | | | | 0 | 0 | 1.8M | | Flash Flood |

Heavy rains associated with the remnants of Tropical Storm Frances caused flooding over portions of Mahoning County. Most of the flooding occurred in the eastern half of the county where rainfall totals were the greatest. The rain began early on the 8th and increased in intensity during the evening hours. The heavy rain continued into the 9th and finally ended just before daybreak. Rainfall totals from the event included: 3.56 inches at Sebring; 3.88 inches at Youngstown; 5.5 inches at Poland; 7.0 inches at



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OHIO, North

Canfield and 9.25 inches near Poland. The Poland area was especially hard hit by flooding. A branch of Yellow Creek left its banks and flooded much of the Cobbler's Run Subdivision along Dobbins Road. Several families had to be evacuated and at least two homes were destroyed when their basement walls collapsed. A library in Poland was also damaged. Extensive street and nuisance flooding was reported in both Beaver and Springfield Townships and also in Campbell and Boardman. Flood waters on some roads were reported to be as much as three feet deep. Occupants of three vehicles had to be rescued from their stranded cars. Two roads were washed out in the southeastern corner of the county. Hundreds of homes in Mahoning County were damaged, mainly by basement and nuisance flooding.

Ashtabula County Countywide

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|--------------------|
| 08 | 2300EST | | | | | | | | |
| 09 | 0400EST | | | 0 | 0 | 800K | | | Flash Flood |

Heavy rains associated with the remnants of Tropical Storm Frances caused flooding over portions of Ashtabula County. Rain began early on September 8th and increased in intensity during the evening hours. The heavy rain continued into the 9th and finally ended just before daybreak. Rainfall totals from the event included: 2.08 inches at Ashtabula; 2.42 inches at Geneva; 2.88 inches at Jefferson; 3.00 inches at New Lyme; 3.68 inches at Conneaut and 4.66 inches at Pierpont. Significant flooding occurred along Conneaut Creek in the northeastern corner of the county. Very heavy rain fell over the headwaters of the creek in Pennsylvania and caused a rapid rise in creek levels beginning around midnight. By 12:24 a.m., a campground along Creek Road in Kingsville Township was under as much as five feet of water. 17 campers at the campground barely escaped the rapidly rising waters and had to be rescued by boat. Several roads near the creek were washed out by the flood waters. Many other roads, including State Route 7 had to be closed because of flooding. Over a dozen vehicles were damaged at an automobile dealership by flood waters up to four feet deep. Hundreds of homes and businesses were damaged by flooding. Several of these sustained significant damage.

OHZ012>014-022>023-032>033

Lake - Geauga - Ashtabula - Portage - Trumbull - Stark - Mahoning

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|---------------------------|
| 09 | 0200EST | | | | | | | | |
| | 1700EST | | | 0 | 0 | 525K | | | Strong Wind (EG40) |

The remnants of Tropical Storm Frances moved northeast across the upper Ohio Valley on September 8th. Gusty northerly winds behind this storm caused considerable damage in northeastern Ohio. Hundreds of trees were downed in Ashtabula, Trumbull, Mahoning, Portage, Lake, Geauga and Stark Counties. Trumbull County was especially hard hit with at least five homes damaged in the Cortland area by fallen trees. Roads were blocked by trees in both Niles and Liberty Township. In Stark County, a tree hit a moving car around 4:30 p.m. The driver sustained only minor injuries, but the car was heavily damaged. In Mahoning County, a fallen tree destroyed a garage in Milton Township. A pier at an Eastlake marina (Lake County) was destroyed by high winds and waves.

OHZ033

Mahoning

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|--------------|
| 09 | 0300EST | | | | | | | | |
| 10 | 2000EST | | | 0 | 0 | 500K | | | Flood |

Runoff from heavy rains produced by the remnants of Tropical Storm Frances caused the Mahoning River to go into flood. At Youngstown, the river went above the flood stage of 10 feet during the late evening hours of September 8th. The river crested at 14.35 feet during the evening of the 9th and fell below flood stage during the evening of the 10th. Extensive flooding occurred in low areas along the river. Several roads were damaged in Mill Creek Park. Buildings along the river in Youngstown also sustained some damage. Many roads along the river had to be closed because of the flooding.

OHZ032

Stark

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|--------------|
| 09 | 0400EST | | | | | | | | |
| | 1800EST | | | 0 | 0 | 300K | | | Flood |

Heavy rains from the remnants of Tropical Storm Frances caused Nimishillen Creek to go into flood during the early morning hours of September 9th. The creek at North Industry crested at 8.98 feet during the early afternoon hours and fell back below the flood stage of 8.0 feet by early evening. Many homes and businesses along the creek experienced flooding. Damage to most of these



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|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|--------------------|

OHIO, North

buildings was minor, but a few did sustain significant damage. Several roads along the creek had to be briefly closed.

OHZ023

Trumbull

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------|
| 09 | 0500EST | 0 | 0 | 250K | Flood |
| 10 | 0900EST | | | | |

Runoff from rains from the remnants of Tropical Storm Frances caused widespread lowland and nuisance flooding across Trumbull County. The Mahoning River at Leavittsburg went above the flood stage of 10 feet during the afternoon hours of the 9th. The river crested at 10.91 feet at 11 p.m. and fell back below flood stage around 9 a.m. on the 10th. Homes along the river experienced minor flooding problems. Several roads in the county remained closed through the 10th.

OHZ023-033

Trumbull - Mahoning

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------|
| 17 | 1115EST | 0 | 0 | 825K | Flood |
| 19 | 1000EST | | | | |

For the second time in a week, extensive urban and lowland flooding was reported across Trumbull and Mahoning Counties. The remnants of Ivan moved across the Ohio Valley on September 17th. A stationary front extending northeast from the low caused heavy rains to develop and fall on most of northeastern Ohio from late on September 16th through the 17th. Rainfall totals for the storm in Trumbull County included: 2.00 inches at Mesopotamia; 2.87 inches at Newton Falls and 3.64 inches at Brookfield. In Mahoning County totals included: 2.80 inches at Canfield; 3.66 inches at East Lewistown and 3.90 inches at Craig Beach. Runoff from this rain caused many rivers and streams to leave their banks flooding many low lying areas. Several roads had to be closed because of the flooding. At Youngstown, the Mahoning River went above the 10 foot flood stage during the afternoon hours of the 17th. The river crested at 14.26 feet at 9 p.m. and fell out of flood late in the morning of September 19th. At Leavittsburg, the Mahoning River went above the 10 foot flood stage during the evening of the 17th and crested at 11.62 feet just before daybreak on the 18th. The river went out of flood early on September 19th. Hundreds of homes in both Mahoning and Trumbull Counties sustained damages from either lowland or basement flooding.

OHZ011-020>021-031-038 Cuyahoga - Medina - Summit - Wayne - Holmes

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------|
| 17 | 1200EST | 0 | 0 | 360K | Flood |
| | 1900EST | | | | |

The remnants of Ivan moved across the Ohio Valley on September 17th. A stationary front extending northeast from the low caused heavy rains to develop and fall on most of northeastern Ohio from late on September 16th through the 17th. Rainfall totals for the storm included: 1.76 inches at Millersburg (Holmes County); 1.84 inches at Wooster (Wayne County); 2.50 inches at Cuyahoga Heights (Cuyahoga County); 2.91 inches at Macedonia (Summit County) and 3.84 inches at Wadsworth (Medina County). Runoff from this rain caused several streams and creeks to leave their banks flooding many low lying areas. A few roads had to be closed because of flooding. Hundreds of homes sustained minor damage from either basement or lowland flooding.

PENNSYLVANIA, Northwest

PAZ003

Crawford

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------|
| 08 | 1904EST | 0 | 0 | 250K | Flood |
| | 2220EST | | | | |

One to three inches of rain fell on Crawford County during the afternoon and evening hours. This rain was associated with the remnants of Tropical Storm Frances. Runoff from the rain caused lowland flooding to begin just after sunset. This flooding gradually worsened as the evening progressed. Reports of street and basement flooding were common.

**Crawford County
Countywide**

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|-----------|----------------|----------|----------|--------------|--------------------|
| 08 | 2220EST | 0 | 0 | 11.5M | Flash Flood |
|-----------|----------------|----------|----------|--------------|--------------------|



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|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------------------------------|---------------------------------|------------------------------|--------------------|

PENNSYLVANIA, Northwest

09 0830EST

Heavy rains associated with the remnants of Tropical Storm Frances caused extensive flooding in Crawford County. Light rain associated with this storm began falling early on September 8th. Rainfall rates increased during the evening hours as the low approached Northwest Pennsylvania. Rainfall totals through midnight on the 9th were as high as 4 to 5 inches, especially in southern Crawford County. The heavy rain continued through early morning hours and finally ended around daybreak after another two to four inches of rain had fallen. Storm total rainfall amounts included: around 4.0 inches at Conneaut Lake; 4.20 inches at Titusville; 5.07 inches at the Meadville Airport; 5.57 inches at Saegertown, 6.0 inches at Meadville; 7.8 inches at Springboro and 10.0 inches at Cambridge Springs. This rain caused rapid rises in area streams and creeks. Evacuations in the county began just after 11 p.m. after Crooked Creek left its banks near Adamsville and Hartstown. The flooding worsened during the early morning hours with many road washouts and evacuations reported. Around 3 a.m., two dozen residents were evacuated from homes along Conneaut Creek in Conneautville with some of the people rescued from second floor windows. Around 30 homes (most along West Street) in this area were heavily damaged by the flooding. Nearby, seven people had to be rescued from their vehicle after flood waters washed it off the road. Church Run, Sugar Creek and Oil Creek left their banks in the southeast corner of the county damaging many homes and washing out several roads. Several people had to be rescued from homes along Shenango Creek in South Shenango Township around 4 a.m. In Meadville, French Creek rapidly rose during the early morning hours. Many people had to be evacuated from homes in the city's Fifth Ward. North of Meadville, flooding along Cussewago Creek washed out a road causing a car to leave the road. The driver was later rescued. Evacuations and extensive flood damage were also reported in the Cambridge Springs, Linesville and Springboro areas. Over 1,200 homes in Crawford County were damaged by flooding caused by Frances. At least several dozen of these were either destroyed or heavily damaged. Damage to roads in the county topped \$2 million. See the flood description for September 9th through the 11th for information on the subsequent flooding along French Creek in Meadville.

PAZ001>002

Northern Erie - Southern Erie

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------|
| 08 | 1930EST | 0 | 0 | 500K | Flood |
| 09 | 0130EST | | | | |

Two to four inches of rain fell on Erie County on September 8th through the early morning hours of the 9th. This rain was associated with the remnants of Tropical Storm Frances. Runoff from the rain caused lowland flooding to begin during the evening hours. This flooding gradually worsened as the evening progressed. Reports of street and basement flooding were common, especially in the southern portion of the county.

**Erie County
Countywide**

| | | | | | |
|-----------|----------------|----------|----------|-------------|--------------------|
| 09 | 0130EST | 0 | 0 | 5.6M | Flash Flood |
| | 0830EST | | | | |

Heavy rains associated with the remnants of Tropical Storm Frances persisted during the early morning hours of September 9th. The rain eventually ended around daybreak. Storm total rainfall amounts from early on the 8th through the 9th generally ranged from 3 to 6 inches in Erie County. Some totals included: 3.5 inches at North East; 3.59 inches at Erie International Airport; 4.32 inches at Union City; 4.75 inches at Corry; 5.0 inches on the east side of Erie; 5.4 inches at Cranesville; 6.5 inches at Edinboro and 7.44 inches at Franklin Center. Runoff from this rain caused extensive flash flooding in Erie County during the morning hours of the 9th. Evacuations began in the Edinboro and McKean areas around 2:30 a.m. The flooding in Edinboro was particularly severe. Water overflowed a dam on Edinboro Lake in the city. Hundreds of residents downstream of the dam, including students at Edinboro University, were evacuated because of the possibility of a dam failure. Cottages just south of the dam were reported to be completely submerged. A bridge just south of the city on State Route 99 was washed out. A second bridge was destroyed north of Edinboro in Washington Township. A landslide wiped out around 500 feet of State Route 5 in Fairview Township between 3 and 4 a.m. Cars and buildings along State Route 5 were damaged by the debris. Elk Creek went into flood around the same time in Fairview forcing several dozen people to be evacuated along State Route 98. In Mill Creek Township, residents were evacuated from two mobile home parks that had flood waters up to three feet deep. Significant flooding was also reported in the Albion and Corry areas. Four vehicles were stranded in flood waters up to four feet deep east of Erie along Interstate 90. A total of 20 roads were either washed out or damaged in the county. Hundreds of homes in the county were damaged by the flooding. Several of these



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|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|--------------------|

PENNSYLVANIA, Northwest

were damaged enough to be declared destroyed.

PAZ001>003

Northern Erie - Southern Erie - Crawford

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|---------------------------|
| 09 | 0200EST | | | | | | | | |
| | 1800EST | | | 0 | 0 | 100K | | | Strong Wind (MG41) |

The remnants of Tropical Storm Frances moved northeast across the Upper Ohio Valley on September 8th. Gusty northerly winds behind this storm caused damage in extreme northwestern Pennsylvania. A peak gust of 47 mph was measured at Erie International Airport. Many trees were downed in both Erie and Crawford Counties. A couple homes in Erie County sustained minor wind damage.

PAZ003

Crawford

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-----------|--|--|--------------|
| 09 | 0830EST | | | | | | | | |
| | 1200EST | | | 0 | 0 | 2M | | | Flood |

Runoff from heavy rains associated with the remnants of Tropical Storm Frances caused French Creek in Meadville to rise to its highest level in 45 years. The creek climbed above the flood stage of 14 feet around daybreak on September 9th. The river crested at 16.36 feet around 10 a.m on the 10th. This level was the highest non-ice affected crest on record. The river finally went below flood stage at midday on the 11th. Damage along the creek was extensive. Meadville's Fifth Ward was especially hard hit with hundreds of homes and businesses damaged. The flooding was particularly bad along Spring Street, Lincoln Avenue and Columbia Street. All but one road leading into Meadville had to be closed because of the flooding. Flood waters in some neighborhoods were as much as 4 to 5 feet deep. Over 1,200 homes were damaged in Crawford County from the flash flooding on 9th and the flooding along French Creek the successive days. In Meadville alone, nine mobile homes were destroyed with 34 houses and five businesses sustaining major damage. See the Flash Flood event description of September 9th for more damage estimates.

PAZ001>003

Northern Erie - Southern Erie - Crawford

| | | | | | | | | | |
|-----------|----------------|--|--|----------|----------|-------------|--|--|--------------|
| 17 | 1030EST | | | | | | | | |
| | 0200EST | | | 0 | 0 | 575K | | | Flood |

For the second time in a week, extensive urban and lowland flooding was reported across Erie and Crawford Counties. The remnants of Ivan moved across the Ohio Valley on September 17th. A stationary front extending northeast from the low caused heavy rains to develop and fall on most of northwestern Pennsylvania from late on September 16th through the daylight hours of the 17th. Rainfall totals for the storm in Crawford County included: 1.36 inches at Cambridge Springs; 1.77 inches at the Meadville Airport and 2.00 inches at Union City. In Erie County rain totals were: 1.30 inches at Edinboro; 1.44 inches at Erie International Airport and 2.1 inches at Cranesville. Runoff from this rain caused many streams and creeks to leave their banks flooding many low lying areas. Many roads had to be closed because of the flooding. At Meadville, French Creek rose rapidly but crested below the flood stage of 14 feet. Hundreds of homes in both Erie and Crawford Counties sustained damage from lowland or basement flooding.