

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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### ILLINOIS, South

**ALEXANDER COUNTY --- 1.6 NW EAST CAPE GIRARDEAU [37.30, -89.50], 1.5 SSE MC CLURE [37.30, -89.42], 1.0 E CACHE [37.10, -89.25], 5.9 W CAIRO [36.99, -89.29], 2.5 W MILLER CITY [37.12, -89.42]**

01/01/16 00:00 CST	4.50M	Flood (due to Heavy Rain)
01/16/16 07:00 CST	0	Source: River/Stream Gage

Mississippi River levels continued their climb from December, and record flooding occurred early in the month. At the Thebes river gage, the river crested at a new record of 47.74 feet before dawn on the 2nd. The old record was 45.91 feet, which was set in May of 1995. Records at Thebes go back to at least 1844. The 2016 crest would have been higher if a major levee break had not occurred in Alexander County. Flood stage at Thebes is 33 feet. The primary flood-related impact was a large levee break (about one-quarter mile wide) in the Len Small Levee near Miller City, between Thebes and Cairo. This levee break contributed to major flooding in and near the communities of Olive Branch and Miller City. Several dozen residences were flooded, some of them by water up to seven feet deep. Voluntary evacuations were requested as floodwaters inundated these communities and cut off access roads. Many homes and businesses in these communities were sandbagged, but many of them ended up being flooded. A Red Cross shelter was opened at Cape Girardeau. The National Guard was requested to assist with sandbagging operations and levee repairs. A couple of relatively small levee breaches were reported between Miller City and Cairo. The levee protecting East Cape Girardeau was in danger of failing, and residents of that community were advised to evacuate. Schools were closed in much of the county due to widespread evacuations. The impact of all of this flooding would have been much greater during the growing season, when crop losses would have been extreme. Because of the high water, barge traffic was restricted on the Mississippi River.

**ALEXANDER COUNTY --- 1.6 S URBANDALE [37.03, -89.18], 1.5 S URBANDALE [37.03, -89.18], 2.6 ESE CAIRO [36.98, -89.14], 2.3 ESE CAIRO [36.98, -89.14], 0.7 NE CAIRO [37.01, -89.17]**

01/01/16 00:00 CST	0.40M	Flood (due to Heavy Rain)
01/19/16 05:00 CST	0	Source: River/Stream Gage

Major flooding of the Ohio River continued into January. At the Cairo river gage, the river crested at 56.14 feet on the 4th. This flood was very similar to the flood of March, 1997, when the crest was 56.2 feet. Flood stage there is 40 feet. The bridge connecting Cairo with Wickliffe, KY was closed due to floodwater over the bridge approach on the Kentucky side. The bridge, which carries U.S. Highway 51/60/62 over the Ohio River, was closed for about one week. Most of the flood gates were installed at Cairo. Areas not protected by the levee and floodwall system were inundated. Since the crop season was not underway, agricultural losses were insignificant.

**FRANKLIN COUNTY --- PLUMFIELD [37.88, -89.00], 2.0 E REND CITY [38.03, -88.94], REND CITY [38.03, -88.98], 0.9 NW BUCKNER [37.99, -89.03], 2.0 E ROYALTON [37.87, -89.08]**

01/01/16 00:00 CST	0	Flood (due to Heavy Rain)
01/08/16 17:00 CST	0	Source: River/Stream Gage

Minor flooding occurred along the Big Muddy River. Low-lying woods and fields were flooded, as well as some county roads.

**GALLATIN COUNTY --- SHAWNEETOWN [37.70, -88.13], 8.7 ESE INMAN [37.80, -88.02], 8.9 NE SHAWNEETOWN [37.78, -88.01], 1.8 SSW SHAWNEETOWN [37.68, -88.14], 2.5 N SALINE MINES [37.66, -88.17], 2.9 SW SHAWNEETOWN [37.67, -88.17]**

01/01/16 00:00 CST	25K	Flood (due to Heavy Rain)
01/11/16 05:00 CST	0	Source: River/Stream Gage

Moderate flooding along the Ohio River continued into January. At the Shawneetown gage, the river crested at 45.25 feet on the 4th. This flood was very similar to the flood of May, 2002, when the crest was 45.42 feet. Flood stage there is 33 feet. The main consequence was numerous flooded secondary roads. There was considerable flooding of low-lying agricultural land. Since the land was mostly unplanted, crop damage was insignificant. Levees protect large parts of the county. Seepage water was pumped out of Old Shawneetown, which has been largely vacated in recent decades after major floods caused heavy damage.

**HARDIN COUNTY --- ROSICLARE [37.42, -88.35], 1.5 SW ELIZABETHTOWN [37.44, -88.32], 1.6 SW ELIZABETHTOWN [37.43, -88.32], 0.6 ESE ROSICLARE [37.42, -88.34]**

01/01/16 00:00 CST	10K	Flood (due to Heavy Rain)
01/11/16 00:30 CST	0	Source: River/Stream Gage

Minor flooding occurred along the Ohio River. The town of Rosiclare was affected. Low-lying woods and fields were flooded, as well as some county roads.

**JACKSON COUNTY --- 0.6 W GRAND TOWER [37.63, -89.51], GRAND TOWER [37.63, -89.50], 2.2 SSE JACOB [37.70, -89.52], 1.5 N GORHAM [37.74, -89.48], 1.7 WNW RADDLE [37.78, -89.61], 2.5 W NEUNERT [37.72, -89.60]**

01/01/16 00:00 CST	1M	Flood (due to Heavy Rain)
01/16/16 07:00 CST	0	Source: River/Stream Gage

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Mississippi River levels continued their climb from December, and record or near-record flooding occurred early in the month. The river gage at Thebes downriver in Alexander County crested at a new record of 47.74 feet on the 2nd. However, the river gage upriver at Chester in Randolph County did not break a record. A voluntary evacuation of the community of Grand Tower was requested, partly due to weaknesses in the levees along the Mississippi and Big Muddy Rivers. Grand Tower sits at the confluence of the Big Muddy and Mississippi Rivers. A Red Cross shelter was opened at Murphysboro. Illinois state highway department crews transported 50,000 sandbags and 100 rolls of plastic for stabilization of slides on a levee. Four state trucks were used to haul rock to low places that needed to be raised up. Illinois Route 3 was closed at the Randolph County line due to flooding. County leaders signed a disaster declaration for the county.

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**JACKSON COUNTY --- GRAND TOWER [37.63, -89.50], 2.0 W POMONA [37.63, -89.37], 0.8 WNW MT CARBON [37.75, -89.34], 1.2 NE GRIMSBY [37.76, -89.43]**

01/01/16 00:00 CST	0.25M	Flood (due to Heavy Rain)
01/14/16 15:00 CST	0	Source: River/Stream Gage

Major flooding of the Big Muddy River continued into January. At the Murphysboro river gage, the river crested at 36.11 feet before dawn on the 2nd. Flood stage there is 22 feet. At Murphysboro, floodwaters approached the flood level of 2008, when the river crested at 37.19 ft on March 23. A mobile home park, a few houses, and a church were flooded or threatened. Sandbagging was done around some affected structures. A Murphysboro couple was rescued by police and firefighters after they were trapped in their home by high water. Extensive flooding of low-lying fields occurred. The intersection of 3rd and Plum Streets in Murphysboro was closed. Floodwater covered the ground below an electrical substation. Slides or slumps developed along a portion of the levee near Grand Tower, prompting concerns about levee failure. Residents were asked to voluntarily evacuate a large area behind the levee. The situation around Grand Tower was heavily affected by backwater from the Mississippi River, which was near record high levels.

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**MASSAC COUNTY --- 1.7 E METROPOLIS [37.15, -88.70], 0.9 WSW METROPOLIS [37.14, -88.74], 2.5 S SHADY GROVE [37.08, -88.57], 1.4 SE UNIONVILLE [37.10, -88.53], 0.9 NW BROOKPORT [37.13, -88.64]**

01/01/16 00:00 CST	6K	Flood (due to Heavy Rain)
01/16/16 17:00 CST	0	Source: River/Stream Gage

Flooding of the Ohio River continued into January. At the Brookport river gage, the river crested at 48.2 feet on the last day of December. Flood stage there is 37 feet. There was considerable flooding of low-lying fields and woodlands. Parts of Fort Massac State Park and some river access roads were underwater. At Brookport, a chronic failure of a flapper gate in the floodwall allowed water to enter the city. Sandbagging and pumping operations were required to minimize the impact to property. In Metropolis, water approached the city streets closest to the river. The water stopped just short of requiring street closures and evacuations. Floodwater entered the access road and parking lot of a Metropolis riverboat casino, causing some inconvenience.

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**POPE COUNTY --- GOLCONDA [37.37, -88.48], 1.6 ENE TANSILL [37.31, -88.50], 1.1 NE TANSILL [37.31, -88.51], 1.5 SW GOLCONDA [37.35, -88.50]**

01/01/16 00:00 CST	15K	Flood (due to Heavy Rain)
01/11/16 00:30 CST	0	Source: River/Stream Gage

Minor flooding occurred along the Ohio River. Low-lying woods and fields were flooded, as well as some county roads. About 10,000 sandbags were delivered to Golconda to support the placement of flood gates.

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**PULASKI COUNTY --- OLMSTED [37.18, -89.08], 1.7 SSE NEW GRAND CHAIN [37.23, -89.01], 2.5 SSE NEW GRAND CHAIN [37.22, -89.00], 0.8 S OLMSTED [37.17, -89.08], 2.1 S AMERICA [37.10, -89.13], 1.5 SSW AMERICA [37.11, -89.13]**

01/01/16 00:00 CST	50K	Flood (due to Heavy Rain)
01/18/16 01:00 CST	0	Source: River/Stream Gage

Major flooding of the Ohio River continued into January. At the Grand Chain river gage, the river crested at 55.4 feet on the 3rd. Flood stage there is 42 feet. This flood was very similar to the flood of May, 1995, when the crest was 55.1 feet. Flood stage there is 42 feet. There was widespread flooding of low-lying fields, and a number of secondary roads were flooded.

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**UNION COUNTY --- WOLF LAKE [37.50, -89.43], REYNOLDSVILLE [37.37, -89.40], 1.0 W REYNOLDSVILLE [37.37, -89.42], 2.1 WSW WARE [37.44, -89.44], 2.5 SW ALDRIDGE [37.53, -89.51]**

01/01/16 00:00 CST	0.70M	Flood (due to Heavy Rain)
01/16/16 07:00 CST	0	Source: River/Stream Gage

Mississippi River levels continued their climb from December, and record or near-record flooding occurred early in the month. There are no river gages in Union County, but there is a gage at Thebes in nearby Alexander County. At the Thebes river gage, the river crested at a new record of 47.74 feet on the 2nd. Backwater from the Mississippi River contributed to flooding of Clear Creek and other tributaries, which affected isolated homes. Some residents were isolated by the floodwaters. Sandbagging operations were conducted to protect water wells and to reinforce levees. The National Guard was activated to assist with the sandbagging. A number of residents voluntarily evacuated. Most of the monetary flood damage was to public infrastructure, such as roads and levees. All access roads to the Mississippi River levees were closed.

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**WABASH COUNTY --- ALLENDALE [38.53, -87.72], 4.0 ESE ALLENDALE [38.51, -87.65], 1.4 ENE MT CARMEL [38.43, -87.75], 1.9 NNW MT CARMEL [38.45, -87.78]**

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	01/01/16 00:00 CST		10K	Flood (due to Heavy Rain)
	01/12/16 12:00 CST		0	Source: River/Stream Gage

Moderate flooding of the Wabash River continued into January . At the Mt. Carmel river gage, the river crested at 29.1 feet on the 6th. Flood stage there is 19 feet. This flood was similar to the flood of March, 2008, when the river crested at 29.72 feet. Some residents along South Division Street in the Mt. Carmel area and in the Keensburg area were evacuated. Several local roads were flooded, some by several feet of water. These included South Division Street, CR 1280 E, and three township roads south of Illinois 1 near Keensburg. Extensive flooding occurred on the northern outskirts of Mount Carmel. Numerous local river roads were flooded. High water backed up into Bon Pas Creek. Installation of flood gates at Mount Carmel was necessary. Access to local camp sites was blocked, but there was minimal impact to commercial activities because of gate closure. Fifth Street that parallels the river was closed. Twin Restaurant along the river also closed. All oil field production ceased with the exception of pumping units on substructures. Access to these was by boat only.

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**WHITE COUNTY --- 0.2 SW PHILLIPSTOWN [38.15, -88.02], 4.2 E PHILLIPSTOWN [38.15, -87.94], 1.0 WNW RISING SUN [38.00, -88.05], 1.8 SW MAUNIE [38.01, -88.07]**

	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/14/16 11:30 CST		0	Source: River/Stream Gage

Moderate flooding of the Wabash River continued into January . At the New Harmony, Indiana river gage, the river crested at 20.69 feet on the 7th. Flood stage there is 15 feet. There was considerable flooding of low-lying woods and fields near the river. A few secondary roads were flooded.

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**WHITE COUNTY --- CARMi [38.08, -88.17], SPRINGERTON [38.18, -88.35], 1.6 NW FRASERS BRIDGE [38.18, -88.30], 3.1 SW CROSSVILLE [38.14, -88.12], 1.1 NW EPWORTH [38.08, -88.11], 3.2 NNE HERALD [38.01, -88.15], 2.2 SE BROWNSVILLE [38.01, -88.22]**

	01/01/16 00:00 CST		30K	Flood (due to Heavy Rain)
	01/17/16 17:00 CST		0	Source: River/Stream Gage

Major flooding of the Little Wabash River continued into January . At the Carmi river gage, the river crested at 35.74 feet on the 3rd. This flood was similar to the flood of April, 2008, when the river crested at 35.54 feet. Flood stage there is 27 feet. Businesses just downstream of Route 14 and Route 1 in Carmi were flooded. Many county roads were flooded. Extensive flooding of farm fields and woodlands occurred. Since planting season was not underway when flooding began, there was little if any crop damage.

**Flooding along parts of the Mississippi River surpassed the Great Flood of 1993. Along most other rivers, the flooding was relatively minor. The Governor of Illinois declared some counties disaster areas, including the Mississippi River counties of Alexander and Jackson. The very wet pattern that developed during the second half of December gradually dried out in January. This allowed all the rivers to fall below flood stage during the early or middle part of the month. The duration and seasonal timing of this Mississippi River flood was exceptionally rare. Past historical Mississippi River floods have occurred during the warm season, and their duration was on the scale of months rather than weeks.**

## Storm Data and Unusual Weather Phenomena - January 2016

Location Date/Time Deaths & Property & Event Type and Details

Injuries

Crop Dmg



*This breach in the Len Small Levee on the Mississippi River near Miller City, Illinois occurred after the river surpassed its highest level on record, set in the Great Flood of 1993. This image was from a flyover conducted by the Illinois State Police on January 2.*

(IL-Z076) WAYNE, (IL-Z077) EDWARDS, (IL-Z078) WABASH, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z087) GALLATIN, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC

01/09/16 18:00 CST 0 Winter Weather

01/10/16 01:00 CST 0

The first snowfall of the season across much of southern Illinois ranged from 1 to 3 inches. The snow was generally along and east of a line from Fairfield to Marion to Cairo. Rain changed to snow from west to east as temperatures fell quickly below freezing. Winds became northwest and increased to around 15 mph with gusts from 20 to 30 mph. Specific snowfall amounts included: 3 inches at Harrisburg and Golconda, 2 inches at Mount Carmel, and 2.5 inches a couple miles north of Metropolis. The snow fell steadily for a few hours, with visibility below one mile. Warm ground temperatures and near-freezing air temperatures limited accumulations at first. As temperatures dropped into the lower 20's, wet and slushy road surfaces became icy. The brisk winds lowered wind chills to between 5 and 15 above in many areas. There was some minor blowing and drifting of the snow across roadways. The synoptic setup consisted of a deep 500 mb trough over the Plains states that lifted northeast across the Mississippi Valley. At the surface, a weak low pressure center over Arkansas strengthened as it moved northeast to Ohio. Increasing northwest winds on the back side of the low brought the season's first bout of wintry weather.

(IL-Z075) JEFFERSON, (IL-Z076) WAYNE, (IL-Z077) EDWARDS, (IL-Z078) WABASH, (IL-Z080) PERRY, (IL-Z081) FRANKLIN, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z084) JACKSON, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z087) GALLATIN, (IL-Z088) UNION, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC

01/19/16 20:00 CST 0 Winter Weather

01/20/16 05:00 CST 0

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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From one to three inches of snow fell across southern Illinois. The one-inch amounts were confined mainly along the Mississippi River. Amounts increased toward the northeast. Snowfall amounts averaged about two inches in the Mount Vernon and Marion-Carbondale areas, and they averaged near three inches from Harrisburg to the Wabash Valley. In the Wabash Valley region, a burst of heavy snow occurred for an hour or two. During this burst, the visibility dropped to around one-quarter mile. The snow readily bonded to paved surfaces due to the sub-freezing ground temperatures. A fatal vehicle accident occurred on Interstate 57 in southern Jefferson County shortly after the snow ended. The driver of a prisoner transport van lost control on the slick road and crossed the median into the path of a tractor-trailer rig. The semi driver was not injured. The van driver was killed, and a teenage passenger in the transport van was injured. Southbound Interstate 57 was closed between the Interstate 64 split and the Ina exit (near the Franklin County line) for about six hours. The synoptic situation was favorable for a winter weather event. A 500 mb shortwave trough lifted northeast from the southern high Plains to the mid and upper Mississippi Valley. At the surface, a weak low pressure system moved eastward into southern Arkansas. The burst of heavy snow was the result of strong warm air advection around 850 mb, which provided strong ascent.

**(IL-Z087) GALLATIN, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z094) MASSAC**

01/22/16 01:00 CST	0	Winter Storm
01/22/16 14:00 CST	0	

**(IL-Z083) WHITE, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z089) JOHNSON, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI**

01/22/16 02:00 CST	0	Winter Weather
01/22/16 14:00 CST	0	

Southern Illinois was on the northwest fringe of the wintry precipitation associated with a low pressure system over the Tennessee Valley. Snowfall amounts were heaviest along the Ohio River from Metropolis to Shawneetown (in Gallatin County), where 4 to 7 inches fell. Further northwest, 1 to 3 inches fell as far northwest as a line from Cairo to Vienna to Harrisburg and Carmi. The intensity of the snowfall varied greatly from one location to the next. The heavy snow occurred in bands associated with the deformation zone on the northwest side of the storm system. Snowfall rates in some of the bands were an inch per hour, with visibility reduced to about one-quarter mile. Some specific snowfall totals included: 7 inches in Hardin County (2 miles northwest of Elizabethtown), 7 inches in southwest Gallatin County (at Leamington), 6 inches in Pope County (5 miles north of Golconda), 3 inches at Cairo, and 2.5 inches at Harrisburg. Following the ending of the snow, strong north winds gusting from 30 to 40 mph caused widespread drifting. The drifts were especially deep in open farm country, where the lack of trees and other obstructions resulted in stronger winds. The winter storm was caused by a deepening 500 mb trough that swung eastward from the Plains across the Mississippi Valley early on the 22nd. A weak low pressure center formed over Texas early on the 21st. The low gradually strengthened as it moved northeast across Alabama early on the 22nd, reaching the Virginia coast early on the 23rd. The low pressure system was accompanied by plenty of Gulf of Mexico moisture, which pivoted as far northwest as southeast Illinois. There was sufficient cold air in place for most of the precipitation to fall as snow.

### INDIANA, Southwest

**GIBSON COUNTY --- 0.8 WNW EAST MT CARMEL [38.40, -87.74], EAST MT CARMEL [38.40, -87.73], CRAWLEYVILLE [38.28, -87.83], 1.7 N CRAWLEYVILLE [38.31, -87.83], 1.8 W SKELTON [38.35, -87.81]**

01/01/16 00:00 CST	20K	Flood (due to Heavy Rain)
01/12/16 12:00 CST	0	Source: River/Stream Gage

Moderate flooding of the Wabash River continued into January. At the Mt. Carmel river gage, the river crested at 29.1 feet on the 6th. Flood stage there is 19 feet. Extensive flooding of low-lying fields occurred in western Gibson County. Numerous local river roads were flooded. Access to local campsites was blocked. Flood waters affected residents of East Mt. Carmel, Indiana.

**GIBSON COUNTY --- 2.3 NE EAST MT CARMEL [38.42, -87.70], 2.5 E EAST MT CARMEL [38.40, -87.68], 0.7 SSE GIRO [38.49, -87.47], 0.9 WNW GIRO [38.51, -87.48], 1.9 NW HAZLETON [38.50, -87.55]**

01/01/16 00:00 CST	30K	Flood (due to Heavy Rain)
01/09/16 13:00 CST	0	Source: River/Stream Gage

Moderate flooding of the White River continued into January. At the Hazleton river gage, the river crested at 24.4 feet on the 5th. Flood stage there is 16 feet. Some river cabin residents evacuated. Most local roads near the river were flooded. Several oil fields were inaccessible.

**PIKE COUNTY --- PETERSBURG [38.50, -87.28], 1.1 NW PETERSBURG [38.51, -87.30], 5.1 NNW ALGIERS [38.55, -87.20], 4.5 NW IVY [38.55, -87.18], 2.6 NNE IVY [38.53, -87.10], 1.3 NE IVY [38.51, -87.10]**

01/01/16 00:00 EST	20K	Flood (due to Heavy Rain)
01/08/16 13:00 EST	0	Source: River/Stream Gage

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>Moderate flooding of the White River continued into January. At the Petersburg river gage, the river crested at 23.93 feet on the 4th. Flood stage there is 16 feet. Extensive flooding affected agricultural and rural residential areas. Numerous roads were flooded. Pike County roads that were flooded, some by several feet of water, included 750N, 600N, 1000E, 250W, 400W, 675N, 700N, 1000W, 900W, 700W, and 775W. Several rural county roads were flooded. Several small oil fields were inaccessible. High water isolated some river cabins. State Road 257 south of Washington was completely flooded.</p>				
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<b>POSEY COUNTY --- GRIFFIN [38.20, -87.92], 1.5 SE GRIFFIN [38.19, -87.90], 2.2 S UPTON [37.94, -87.98], 4.0 WSW UPTON [37.94, -88.03], 2.2 WNW SAVAH [38.03, -88.02]</b>	01/01/16 00:00 CST		10K	Flood (due to Heavy Rain)
	01/14/16 11:00 CST		0	Source: River/Stream Gage
<p>Moderate flooding of the Wabash River continued into January. At the New Harmony river gage, the river crested at 20.69 feet on the 7th. Flood stage there is 15 feet. There was considerable flooding of low-lying woods and fields near the river. A few secondary roads were flooded. Parts of northern New Harmony began to flood, and sandbagging became necessary in town. Harmonie State Park was closed.</p>				
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<b>POSEY COUNTY --- MT VERNON [37.93, -87.90], 7.5 SW HOVEY [37.82, -88.03], 8.2 SSW HOVEY [37.79, -87.97], 6.0 S HOVEY [37.81, -87.91], 4.5 SSW MARRS CENTER [37.89, -87.81]</b>	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/08/16 03:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into January. Some low-lying farm fields and county roads in the bottomlands were flooded, mainly west and southwest of Mount Vernon.</p>				
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<b>SPENCER COUNTY --- ROCKPORT [37.88, -87.05], 2.4 S PUEBLO [37.80, -87.12], 3.5 S PUEBLO [37.78, -87.11], 0.9 ESE AFRICA [37.83, -87.05]</b>	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/01/16 19:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into January. Low-lying agricultural land and some county roads in the bottomlands were inundated.</p>				
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<b>VANDERBURGH COUNTY --- CYPRESS [37.92, -87.63], 4.0 SSE SMYTHE [37.94, -87.46], 5.7 SE EVANSVILLE [37.91, -87.49], 2.4 WSW VAUGHAN [37.88, -87.67], 3.9 W CYPRESS [37.91, -87.70]</b>	01/01/16 00:00 CST		30K	Flood (due to Heavy Rain)
	01/02/16 10:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into January. Agricultural bottomland and county roads in the bottomlands were flooded. Basements along the Evansville riverfront began to fill. Flooding began along Pigeon Creek, which is a tributary of the Ohio River. The levee authority operated several pumping stations and closed the flood gates downtown.</p>				
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<b>WARRICK COUNTY --- 1.6 SE NEWBURGH [37.94, -87.40], 2.3 SSE YANKEETOWN [37.89, -87.29], 1.5 SSE YANKEETOWN [37.90, -87.29], 2.7 ESE NEWBURGH [37.94, -87.37]</b>	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/05/16 12:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into January. Floodwaters approached Highway 662 near the old Lock and Dam 47. This is approximately one-half mile downstream from the current lock and dam. Floodwaters covered agricultural bottomland, which was primarily dormant during the winter season.</p>				
<p><b>The widespread minor to moderate river flooding that began late in December continued into early January. The very wet pattern that developed during the second half of December gradually dried out in January. This allowed all the rivers to fall below flood stage during the early or middle part of the month.</b></p>				
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<b>GIBSON COUNTY --- PATOKA [38.42, -87.58], 2.4 NW DONGOLA [38.41, -87.36], 1.6 N OAKLAND CITY [38.35, -87.35], 2.2 SSW PATOKA [38.39, -87.59]</b>	01/04/16 08:00 CST		0	Flood (due to Planned Dam Release)
	01/06/16 14:00 CST		0	Source: River/Stream Gage
<p>Minor flooding occurred along the Patoka River. Some low-lying woods and fields were flooded.</p>				
<p><b>Minor flooding occurred along the Patoka River as a result of increased releases from the dam on Patoka Lake. The lake was swollen from the rainy pattern in late December.</b></p>				
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<b>(IN-Z081) GIBSON, (IN-Z082) PIKE, (IN-Z085) POSEY, (IN-Z086) VANDERBURGH, (IN-Z087) WARRICK, (IN-Z088) SPENCER</b>	01/09/16 22:00 CST		0	Winter Weather
	01/10/16 04:00 CST		0	

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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The first snowfall of the season ranged from 1 to 3 inches. Rain changed to snow from west to east as temperatures fell quickly below freezing. Winds became northwest and increased to around 15 mph with gusts from 20 to 30 mph. Specific snowfall amounts included: 3 inches in Petersburg and Rockport, 2 inches in Boonville and Fort Branch, and 1 inch in Mount Vernon. The snow fell steadily for a few hours, with visibility below one mile. Warm ground temperatures and near-freezing air temperatures limited accumulations at first. As temperatures dropped into the lower 20's, wet and slushy road surfaces became icy. The brisk winds lowered wind chills to between 5 and 15 above in many areas. There was some minor blowing and drifting of the snow across roadways. The synoptic setup consisted of a deep 500 mb trough over the Plains states that lifted northeast across the Mississippi Valley. At the surface, a weak low pressure center over Arkansas strengthened as it moved northeast to Ohio. Increasing northwest winds on the back side of the low brought the season's first bout of wintry weather.

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**(IN-Z081) GIBSON, (IN-Z085) POSEY, (IN-Z086) VANDERBURGH**

01/19/16 23:00 CST	0	Winter Weather
01/20/16 06:00 CST	0	

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**(IN-Z082) PIKE, (IN-Z087) WARRICK, (IN-Z088) SPENCER**

01/19/16 23:00 CST	0	Heavy Snow
01/20/16 07:00 CST	0	

From three to four inches of snow fell across southwest Indiana. The four-inch amounts were primarily east and northeast of Evansville, including Petersburg and Rockport. A burst of heavy snow occurred for an hour or two, during which time the visibility dropped to around one-quarter mile. Snowfall rates around an inch per hour were reported. The snow readily bonded to paved surfaces due to the sub-freezing ground temperatures. The synoptic situation was favorable for a winter weather event. A 500 mb shortwave trough lifted northeast from the southern high Plains to the mid and upper Mississippi Valley. At the surface, a weak low pressure system moved eastward into southern Arkansas. The burst of heavy snow was the result of strong warm air advection around 850 mb, which provided strong ascent.

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**(IN-Z082) PIKE, (IN-Z085) POSEY**

01/22/16 04:00 CST	0	Winter Weather
01/22/16 16:00 CST	0	

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**(IN-Z086) VANDERBURGH, (IN-Z087) WARRICK, (IN-Z088) SPENCER**

01/22/16 04:00 CST	0	Winter Storm
01/22/16 16:00 CST	0	

Southwest Indiana was on the northern fringe of the wintry precipitation associated with a low pressure system over the Tennessee Valley. Snowfall amounts were heaviest along the Ohio River from Evansville eastward across Warrick and Spencer Counties. Four to six inches of snow was common in that area. Further north and west, 1 to 3 inches fell from Mount Vernon (in Posey County) to Stendal (in Pike County). The intensity of the snowfall varied greatly from one location to the next. The heavy snow occurred in bands associated with the deformation zone on the northwest side of the storm system. Snowfall rates in some of the bands were an inch per hour, with visibility reduced to one-quarter mile. Some specific snowfall totals included: 5 inches in Evansville, Boonville, Newburgh, and Rockport, 2.5 inches along the Wabash River in west central Posey County, and 2 inches at Stendal in Pike County. Following the ending of the snow, strong north winds gusting from 30 to 40 mph caused widespread drifting. The drifts were especially deep in open farm country, where the lack of trees and other obstructions resulted in stronger winds. The winter storm was caused by a deepening 500 mb trough that swung eastward from the Plains across the Mississippi Valley early on the 22nd. A weak low pressure center formed over Texas early on the 21st. The low gradually strengthened as it moved northeast across Alabama early on the 22nd, reaching the Virginia coast early on the 23rd. The low pressure system was accompanied by plenty of Gulf of Mexico moisture, which pivoted as far northwest as southeast Illinois. There was sufficient cold air in place for most of the precipitation to fall as snow.

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### KENTUCKY, Southwest

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**BALLARD COUNTY --- OSCAR [37.13, -89.03], 1.9 WNW WICKLIFFE [36.98, -89.11], 1.7 WNW EAST CAIRO [37.03, -89.18], 3.5 WNW OSCAR [37.15, -89.09]**

01/01/16 00:00 CST	0.10M	Flood (due to Heavy Rain)
01/18/16 01:00 CST	0	Source: River/Stream Gage

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>Major flooding of the Ohio River continued into January. At the Cairo, Illinois river gage, the river crested at 56.14 feet on the 4th. Flood stage there is 40 feet. This flood crest at Cairo was close to the crest of 56.20 feet in the March, 1997 flood. A state of emergency was declared by the county government. The Ohio River bridge connecting Cairo, Illinois with Ballard County remained closed for a week as floodwaters covered the bridge approach on the Kentucky side. A small number of homes were evacuated in Ballard County, numbering about a dozen. Sandbagging operations were conducted around vulnerable structures. U.S. Highway 51 was flooded and closed near the Carlisle County line. There was considerable flooding of low-lying fields and woodlands. Parts of a wildlife management area and some river access roads were underwater.</p>				
<b>CRITTENDEN COUNTY --- TOLU [37.43, -88.25], 1.3 NW TOLU [37.44, -88.27], 7.0 WNW IRMA [37.42, -88.37], 7.0 W IRMA [37.38, -88.38]</b>				
	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/09/16 19:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into January. Low-lying fields and woodlands were underwater, along with some river access roads.</p>				
<b>DAVISS COUNTY --- 0.9 NNW OWENSBORO [37.78, -87.13], 2.0 ENE OWENSBORO [37.78, -87.09], 1.8 ENE OWENSBORO [37.78, -87.09], 0.5 NW OWENSBORO [37.78, -87.13]</b>				
	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/01/16 19:00 CST		0	Source: River/Stream Gage
<p>Minor flooding of the Ohio River continued into New Years Day. Bottomland fields were inundated.</p>				
<b>HENDERSON COUNTY --- 3.3 NNW BASKETT [37.91, -87.49], 2.6 NNE BASKETT [37.90, -87.45], 4.0 NNE HENDERSON [37.88, -87.55], 3.5 S WHITE CITY [37.90, -87.58], 2.5 S WHITE CITY [37.91, -87.58]</b>				
	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/03/16 09:00 CST		0	Source: River/Stream Gage
<p>Minor flooding continued into the first few days of January on the Ohio River in the Henderson area. Parts of Audubon State Park were flooded, along with a couple bottomland roads and woodlands near the Green River confluence.</p>				
<b>LIVINGSTON COUNTY --- 0.9 WNW SMITHLAND [37.13, -88.42], 1.3 SSE BIRDSVILLE [37.20, -88.44], 1.5 SE BIRDSVILLE [37.20, -88.43], 1.3 NNW SMITHLAND [37.15, -88.41]</b>				
	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/12/16 04:00 CST		0	Source: River/Stream Gage
<p>Minor flooding continued into January along the Ohio River. Low-lying bottomland woods and fields were flooded, including parts of a private campground near Birdsville.</p>				
<b>MCCRACKEN COUNTY --- 1.1 ENE ROWLANDTOWN [37.11, -88.61], 3.5 NNE GRAHAMVILLE [37.15, -88.76], 2.4 NE GRAHAMVILLE [37.12, -88.75], 0.8 W ROWLANDTOWN [37.10, -88.64]</b>				
	01/01/16 00:00 CST		10K	Flood (due to Heavy Rain)
	01/14/16 05:00 CST		0	Source: River/Stream Gage
<p>Moderate flooding continued into January on the Ohio River. At the Paducah river gage, the river crested at 46.0 feet around noon on New Years Eve. Flood stage is 39 feet at Paducah. Parts of Kentucky Highway 1420 were closed in the flood plain west of Paducah. The riverfront park near downtown Paducah was flooded and closed. Ohio River backwater was responsible for flooding of the Clarks River in eastern McCracken County. There was considerable flooding of low-lying bottomland fields and woods, and water encroached on several residences. Near the Clarks River, a few outbuildings were flooded, and Highways 787, 1255, and 131 were closed.</p>				
<b>MCCLEAN COUNTY --- CALHOUN [37.53, -87.27], 1.9 NW CALHOUN [37.55, -87.29], 2.5 W CALHOUN [37.53, -87.32], 0.5 SW RUMSEY [37.51, -87.28], 0.5 ESE CALHOUN [37.53, -87.26], 2.0 ESE RUMSEY [37.51, -87.24], 2.1 E RUMSEY [37.52, -87.23], 0.9 ENE CALHOUN [37.53, -87.25]</b>				
	01/01/16 00:00 CST		20K	Flood (due to Heavy Rain)
	01/07/16 02:00 CST		0	Source: River/Stream Gage
<p>Moderate flooding continued into January on the Green River. At the Calhoun river gage, the river crested at 28.10 feet on New Years Eve. Flood stage there is 23 feet. Several county roads were closed. Kentucky Highway 85 near Island was closed, along with West Second Street in Rumsey. A couple of streets in Livermore were closed. In Livermore, the water levels came within a couple feet of shutting down the water plant that provides water to the city. A riverfront park in Calhoun was submerged. The Army Corps of Engineers Lock and Dam structure in Calhoun ceased operations after it went under water. Thousands of acres were flooded in the Island, Rumsey, and Jewel City areas. The acreage was mostly dormant cropland, woods, and fields.</p>				
<b>MUHLBERG COUNTY --- PARADISE [37.27, -86.98], 1.3 SE PARADISE [37.26, -86.96], 1.3 SSE PARADISE [37.25, -86.97], 0.4 W PARADISE [37.27, -86.99]</b>				
	01/01/16 00:00 CST		0	Flood (due to Heavy Rain)
	01/07/16 17:00 CST		0	Source: River/Stream Gage

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Moderate flooding continued into January on the Green River. At the Paradise river gage, the river crested at 390.75 feet on December 30th. Flood stage there is 380 feet. Kentucky Highways 1379 and 2590 were closed. Widespread flooding of low-lying areas around the river took place.

**UNION COUNTY --- 0.9 W UNIONTOWN [37.77, -87.95], 3.7 WNW UNIONTOWN [37.79, -87.99], 4.7 W UNIONTOWN [37.77, -88.02], 1.5 WSW UNIONTOWN [37.76, -87.96]**

	01/01/16 00:00 CST	0	Flood (due to Heavy Rain)
	01/09/16 19:00 CST	0	Source: River/Stream Gage

Minor flooding of the Ohio River continued into January. Low-lying fields and woodlands, as well as some bottomland county roads, were underwater.

The widespread river flooding that began late in December continued into early January. Some of the flooding reached major levels along the Ohio River downriver from Paducah, but elsewhere the river flooding was minor to moderate. The very wet pattern that developed during the second half of December gradually dried out in January. This allowed all the rivers to fall below flood stage during the early or middle part of the month.

**(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCRACKEN, (KY-Z006) GRAVES, (KY-Z007) LIVINGSTON, (KY-Z008) MARSHALL, (KY-Z009) CALLOWAY, (KY-Z010) CRITTENDEN, (KY-Z011) LYON, (KY-Z012) TRIGG, (KY-Z013) CALDWELL, (KY-Z014) UNION, (KY-Z015) WEBSTER, (KY-Z016) HOPKINS, (KY-Z017) CHRISTIAN, (KY-Z018) HENDERSON, (KY-Z019) DAVIESS, (KY-Z020) MCLEAN, (KY-Z021) MUHLENBERG, (KY-Z022) TODD**

	01/09/16 20:00 CST	0	Winter Weather
	01/10/16 04:00 CST	0	

The first snowfall of the season ranged from 1 to 3 inches. The snow was lightest in southern parts of the Pennyriple region, including Hopkinsville, where amounts were around an inch. Rain changed to snow from west to east as temperatures fell quickly below freezing. Winds became northwest and increased to around 15 mph with gusts from 20 to 30 mph. Specific snowfall amounts included: 3 inches in Murray, 2 inches in Providence and Owensboro, 1 inch in Paducah and Fulton, and one-half inch in Guthrie in Todd County. There was also some light icing reported near the Tennessee border. The snow fell steadily for a few hours, reducing visibility below one mile. Warm ground temperatures and near-freezing air temperatures limited accumulations at first. As temperatures dropped into the lower 20's, wet and slushy road surfaces became icy. The brisk winds lowered wind chills to between 5 and 15 above in many areas. There was some minor blowing and drifting of the snow across roadways. The synoptic setup consisted of a deep 500 mb trough over the Plains states that lifted northeast across the Mississippi Valley. At the surface, a weak low pressure center over Arkansas strengthened as it moved northeast to Ohio. Increasing northwest winds on the back side of the low brought the season's first bout of wintry weather.

**(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCRACKEN, (KY-Z006) GRAVES, (KY-Z007) LIVINGSTON, (KY-Z008) MARSHALL, (KY-Z009) CALLOWAY, (KY-Z010) CRITTENDEN, (KY-Z011) LYON, (KY-Z012) TRIGG, (KY-Z013) CALDWELL, (KY-Z014) UNION, (KY-Z015) WEBSTER, (KY-Z016) HOPKINS, (KY-Z017) CHRISTIAN, (KY-Z018) HENDERSON, (KY-Z019) DAVIESS, (KY-Z020) MCLEAN, (KY-Z021) MUHLENBERG, (KY-Z022) TODD**

	01/19/16 23:00 CST	0	Winter Weather
	01/20/16 07:00 CST	0	

From one to three inches of snow fell across western Kentucky. The one-inch amounts were confined mainly to the far western counties, from Paducah and Mayfield west. Amounts increased toward the northeast. Snowfall amounts averaged about two inches in the Kentucky Lake region and about three inches from Marion to the Henderson-Owensboro areas. In the Henderson-Owensboro areas, a burst of heavy snow occurred for an hour or two. During this burst, the visibility dropped to around one-quarter mile. Snowfall rates up to two inches per hour were reported near Owensboro. The snow readily bonded to paved surfaces due to the sub-freezing ground temperatures. Roads were snow-covered and slippery, and schools were cancelled. Along the Tennessee border from Murray west, periods of sleet were observed. Total accumulations in the Pennyriple region, including Hopkinsville, averaged two to three inches. The synoptic situation was favorable for a winter weather event. A 500 mb shortwave trough lifted northeast from the southern high Plains to the mid and upper Mississippi Valley. At the surface, a weak low pressure system moved eastward into southern Arkansas. The burst of heavy snow was the result of strong warm air advection around 850 mb, which provided strong ascent.

**(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCRACKEN, (KY-Z006) GRAVES, (KY-Z007) LIVINGSTON, (KY-Z008) MARSHALL, (KY-Z009) CALLOWAY, (KY-Z010) CRITTENDEN, (KY-Z011) LYON, (KY-Z012) TRIGG, (KY-Z013) CALDWELL, (KY-Z014) UNION, (KY-Z015) WEBSTER, (KY-Z016) HOPKINS, (KY-Z017) CHRISTIAN, (KY-Z018) HENDERSON, (KY-Z019) DAVIESS, (KY-Z020) MCLEAN, (KY-Z021) MUHLENBERG, (KY-Z022) TODD**

	01/21/16 22:00 CST	0	Winter Storm
	01/22/16 18:00 CST	0	

Western Kentucky was heavily impacted by the wintry precipitation associated with a low pressure system over the Tennessee Valley. Widespread snowfall amounts from 6 to 10 inches were reported. The exception was in the Mississippi River counties from Fulton to Ballard, where 4 to 6 inches was the norm. The precipitation began as a brief period of freezing rain and sleet that produced a light glaze on most surfaces. In Muhlenberg County, the initial period of freezing rain lasted over an hour, causing numerous accidents. The heaviest ice accumulations were in Todd County, where one-quarter inch of ice knocked out power to several hundred. In Hopkins

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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County, nearly one-quarter inch of sleet accumulated before the changeover to snow. Once the changeover to snow occurred, the intensity of the snowfall varied greatly from one location to the next. The heavy snow occurred in bands associated with the deformation zone on the northwest side of the storm system. Snowfall rates in some of the bands were two inches per hour, with visibility reduced below one-quarter mile. Some specific snowfall totals included: 9 inches in Madisonville, Greenville, Marion, and Eddyville, 8 inches in Mayfield, 7 inches in Henderson, Owensboro, Oak Grove (Christian County), and Benton, and 6 inches in Princeton, Murray, and Fulton. Prior to the changeover to snow, ice accumulations ranged from a trace at Paducah and Marion to one-quarter inch in Todd County. There was little if any ice in the Henderson and Owensboro areas. Following the ending of the snow, strong north winds gusting from 30 to 40 mph caused widespread drifting. The drifts were especially deep in open farm country, where the lack of trees and other obstructions resulted in stronger winds. Roads were snow-covered and slippery. Schools were cancelled for days following the storm. The winter storm was the result of a deepening 500 mb trough that swung eastward from the Plains across the Mississippi Valley early on the 22nd. A weak low pressure center formed over Texas early on the 21st. The surface low gradually strengthened as it moved northeast across Alabama early on the 22nd, reaching the Virginia coast early on the 23rd. The low pressure system was accompanied by plenty of Gulf of Mexico moisture, which pivoted as far northwest as southeast Illinois. There was sufficient cold air in place for most of the precipitation to fall as snow.



## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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*Following the January 22 winter storm, the Trigg County Road Department cleared this deep drift from a county road in the northeast part of the county. Flat open farmland in this area was conducive for stronger winds and deeper drifts than urban or forested areas. Photo courtesy of the Trigg County Road Department.*

### MISSOURI, Southeast

**CAPE GIRARDEAU COUNTY --- 2.3 WNW HINES LNDG [37.56, -89.57], 0.6 NE HINES LNDG [37.56, -89.52], 4.1 SSE EGYPT MILLS [37.35, -89.44], 4.7 ESE GULF JCT [37.24, -89.48], 0.7 WSW NASH [37.23, -89.64], 0.9 NNE DUTCHTOWN [37.26, -89.67], 1.5 NNE CAPE GIRARDEAU [37.32, -89.52]**

01/01/16 00:00 CST	3M	Flood (due to Heavy Rain)
01/16/16 21:00 CST	0	Source: River/Stream Gage

Mississippi River levels continued their climb from December, and record flooding occurred early in the month. At the Cape Girardeau river gage, the river crested at a new record of 48.86 feet on the evening of New Year's Day. The old record was 48.49 feet, which was set in August of 1993. Records at Cape Girardeau go back at least a century. The 2016 crest would likely have been higher if there had not been a levee break in Alexander County, Illinois. Flood stage at Cape Girardeau is 32 feet. The estimated acreage that was flooded was 24,000 acres, of which 17,000 was cropland. Much of the flooded acreage was in the diversion channel floodplain, which extends from Allenville east to Dutchtown and Scott City. Numerous roads were flooded, including Highway 74. Dozens of residences were inaccessible due to flooding. A number of businesses and homes were flooded, including about twenty homes and eight businesses in the city of Cape Girardeau. These homes and businesses were mainly in the Red Star neighborhood of Cape Girardeau and on the south side of the city near Highway 74. Firefighters rescued a man and his dog from one of the homes. A voluntary evacuation advisory was issued for the community of Allenville, which was completely surrounded by water. Flood walls and levees protect most of the city of Cape Girardeau. These structures held up during this record flood. To protect a concrete plant outside the levee system, crews built a 1,200 to 1,500-foot levee in a short period of time.

**MISSISSIPPI COUNTY --- BIRDS PT [36.97, -89.15], 1.9 WNW DORENA [36.59, -89.26], 1.4 NE DORENA [36.59, -89.21], 0.8 SW BELMONT [36.76, -89.13], 3.4 SE BIRDS PT [36.93, -89.11]**

01/01/16 00:00 CST	0.10M	Flood (due to Heavy Rain)
01/17/16 04:00 CST	0	Source: River/Stream Gage

Mississippi River levels continued their climb from December, and major flooding occurred early in the month. The river gage upriver at Cape Girardeau crested at a new record of 48.86 feet on the 1st. However, the river gage downriver at New Madrid only experienced moderate flooding. Mississippi County is very rural, and most of the developed land is protected by a levee system. Although extensive cropland flooding occurred, very little of it was planted in the middle of winter. County roads outside of the levee system were flooded.

**NEW MADRID COUNTY --- 3.8 SE NEW MADRID [36.56, -89.48], 4.2 ESE NEW MADRID [36.58, -89.46], 2.2 ESE NEW MADRID [36.59, -89.49], 1.2 S NEW MADRID [36.58, -89.53]**

01/01/16 00:00 CST	20K	Flood (due to Heavy Rain)
01/17/16 04:00 CST	0	Source: River/Stream Gage

Moderate flooding of the Mississippi River continued into January. At the New Madrid river gage, the river crested at 43.05 feet on the 4th. Flood stage there is 34 feet. This flood was similar to the flood of March, 1997, when the river crested at 42.94 feet. There was considerable flooding of cropland unprotected by levees. Numerous county roads were flooded. The National Guard was deployed to a small part of the county for security purposes.

**PERRY COUNTY --- ALTENBURG [37.63, -89.58], 1.0 SE WITTENBURG [37.64, -89.52], 2.9 E STARLAND [37.69, -89.53], 2.1 N BELGIQUE [37.86, -89.78], 0.6 SW BELGIQUE [37.82, -89.79]**

01/01/16 00:00 CST	0.25M	Flood (due to Heavy Rain)
01/16/16 07:00 CST	0	Source: River/Stream Gage

Mississippi River levels continued their climb from December, and record or near-record flooding occurred early in the month. The river gage downriver at Cape Girardeau crested at a new record of 48.86 feet on the 1st. However, the river gage upriver at Chester in Randolph County did not break a record. Efforts were made to fortify the Bois Brule Levee to protect area homes and businesses. The National Guard worked around the clock to ensure the security of residents. The Highway 51 bridge to Chester, Illinois was closed. Several roads were closed, including Highway E near Menfro. Most of the other roads were rural county roads. A main railway was closed due to water over the tracks. Barge traffic was restricted on the river due to strong currents.

**SCOTT COUNTY --- SCOTT CITY [37.25, -89.52], 2.2 NE ILLMO [37.24, -89.48], 3.1 N LUSK [37.08, -89.38], 3.2 NW LUSK [37.06, -89.43]**

01/01/16 00:00 CST	0.50M	Flood (due to Heavy Rain)
01/16/16 21:00 CST	0	Source: River/Stream Gage

## Storm Data and Unusual Weather Phenomena - January 2016

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Mississippi River levels continued their climb from December, and record flooding occurred early in the month. At the Thebes, Illinois river gage, the river crested at a new record of 47.74 feet before dawn on the 2nd. The old record was 45.91 feet, which was set in May of 1995. Records at Thebes go back to at least 1844. The 2016 crest would have been higher if a major levee break had not occurred between Thebes and Cairo, Illinois. Flood stage at Thebes is 33 feet. Thousands of acres of unprotected land outside the levee system were flooded, most of which was cropland. The small community of Commerce, which is not protected by a levee, was severely flooded. Only about nine homes in the community remain occupied following a series of government buyouts. A private agricultural levee was breached just south of Commerce, resulting in the inundation of 5,500 acres of empty cropland. The private levee was located on the river side of a much bigger federal levee that functioned very well.

**Flooding along parts of the Mississippi River exceeded the Great Flood of 1993. The primary rainfall event that triggered the historic flooding was a swath of 6 to 12 inches across central Missouri from December 26 to 28. The axis of heaviest rainfall extended roughly along Interstate 44 in Missouri, then northeast into central Illinois. The very wet pattern that developed during the second half of December gradually dried out in January. This allowed the Mississippi River to fall below flood stage during the middle part of the month. The duration and seasonal timing of this Mississippi River flood was exceptionally rare. Past historical Mississippi River floods have occurred during the warm season, and their duration was on the scale of months rather than weeks.**

(MO-Z076) PERRY, (MO-Z086) BOLLINGER, (MO-Z087) CAPE GIRARDEAU, (MO-Z100) WAYNE, (MO-Z107) CARTER, (MO-Z108) RIPLEY, (MO-Z109) BUTLER, (MO-Z110) STODDARD, (MO-Z111) SCOTT, (MO-Z112) MISSISSIPPI, (MO-Z114) NEW MADRID

01/19/16 17:00 CST	0	Winter Weather
01/20/16 05:00 CST	0	

Around one inch of snow fell across southeast Missouri. A period of freezing rain and sleet occurred at the onset, especially from Cape Girardeau south and southwest. The freezing rain produced a thin glaze of ice on roads that resulted in dangerous travel conditions. A number of accidents were reported due to the ice, which was difficult to see. One-quarter inch of sleet and freezing rain was measured at Poplar Bluff before the changeover to snow. The synoptic situation was favorable for a winter weather event. A 500 mb shortwave trough lifted northeast from the southern high Plains to the mid and upper Mississippi Valley. At the surface, a weak low pressure system moved eastward into southern Arkansas.

(MO-Z109) BUTLER, (MO-Z110) STODDARD, (MO-Z111) SCOTT, (MO-Z114) NEW MADRID

01/21/16 21:00 CST	0	Winter Weather
01/22/16 10:00 CST	0	

(MO-Z112) MISSISSIPPI

01/22/16 00:00 CST	0	Winter Storm
01/22/16 13:00 CST	0	

The southeast corner of Missouri was clipped by the wintry precipitation associated with a low pressure system over the Tennessee Valley. Snowfall amounts from 4 to 6 inches were reported in Mississippi County. Amounts quickly tapered off to 1 to 3 inches in adjacent Scott and New Madrid counties. Further west in the Poplar Bluff area, a period of light freezing rain caused many accidents. The intensity of the snowfall varied greatly from one location to the next. The heavy snow in Mississippi County occurred in bands associated with the deformation zone on the northwest side of the storm system. Snowfall rates in some of the bands were near an inch per hour in Mississippi County, with visibility reduced to about one-quarter mile. Some specific snowfall totals included: 4 inches in East Prairie in Mississippi County, and 2 inches in Lilbourn in New Madrid County. The snow was preceded by a period of freezing rain. Prior to the changeover to snow, up to one-tenth of an inch of ice was reported. Following the ending of the snow, strong north winds gusting from 30 to 40 mph caused widespread drifting. The drifts were especially deep in open farm country, where the lack of trees and other obstructions resulted in stronger winds. The winter storm was caused by a deepening 500 mb trough that swung eastward from the Plains across the Mississippi Valley early on the 22nd. A weak low pressure center formed over Texas early on the 21st. The low gradually strengthened as it moved northeast across Alabama early on the 22nd, reaching the Virginia coast early on the 23rd. The low pressure system was accompanied by plenty of Gulf of Mexico moisture, which pivoted as far northwest as southeast Missouri. There was sufficient cold air in place for most of the precipitation to fall as snow. The exception was around Poplar Bluff, where a small amount of freezing rain caused numerous accidents.