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Indiana State Climate Office
Monthly Weather Report

Jan 9, 2017

http://www.iclimate.org

December 2016 Climate Summary

Month Summary

A string of six warmer than normal months in a row came to an end. A late month warmup wasn't enough to offset three surges of Arctic air into Indiana in early and mid-December. Freezing rain, snow, and sleet during sharp transitions between cold and warm spells challenged travelers. At least 3 people died and more than 130 were injured in the nearly 900 reported weather related vehicle accidents. Two children also died when they fell through ice on a southern Indiana pond. Record warmth and heavy rainfall on December 26th led to flood warnings. By the end of the month the Indiana drought was over.

The December state average temperature of 29.8°F was 1.3° below normal, the first cool month since May. This number ties 1927 and 1973 as the 49th coldest December on record. Some recent colder Decembers include 2005 with a 26.7°F average in 24th place, 2010 at 24.3°F in the 14th spot, and 2000 with 19.2°F, good for 2nd coldest. The coldest December on record came in 1989 with its state average 18.2°F. The day split in December 2016 was 15 days of below normal temperature, 13 days above normal, and 3 days at normal. There were 2 days each when the state mean temperature was at least 10°F and 20°F above normal. There were 5 days when the daily average was at least 10°F below normal and 2 days at least 20°F below normal. The highest temperature of the month was 71°F on December 27th at Cannelton and the coolest was -17°F on December 19th at Lowell.

December state precipitation averaged 2.37" which is 0.69" below normal. This ties 1985 as the 45th driest December on record. Some recent drier Decembers include 2005 with 2.15", the 39th driest on record. In 2010 its 1.44" average comes in as the 16th driest. The driest December on record was in 1958 with just 0.55". The heaviest single day precipitation among cooperative network stations in December 2016 was 3.77" measured on December 18th in Cannelton. The highest in the CoCoRaHS network was 3.55" that same day at Elizabeth 1.4n. The largest month total precipitation in the cooperative network was 6.88", again at Cannelton. In the CoCoRaHS network the heaviest was 6.52" at Tell City 0.9nne. Widespread precipitation fell on about 12 days this month.

The greatest daily snowfall reported in the cooperative network was 11.2" on December 18th at Laporte. In the CoCoRaHS network 16.0" was tallied that same day at Valparaiso 2.0wsw. For the complete month 27.4" was summed at Laporte in the cooperative station network while 28.5" was collected by the CoCoRaHS volunteer at Valparaiso 2.0wsw. Overall it snowed on about 8 days across the state in December.

Regionally December 2016 precipitation was near 70% of normal in northern Indiana, about 60% in central Indiana, and right about normal across the south. Normal December precipitation ranges from 2.7" across northern Indiana to 3.6" in the south central part of the state. By the conclusion of December nearly 25% of Indiana land was rated as abnormally dry while the remaining 75% was considered to be in normal soil moisture status for this time of year.

December 1st – 10th

Temperatures held near normal the first six days of December until sharply colder weather arrived behind a quick sequence of cold fronts. Light precipitation was recorded on 9 of the 10 days in this interval but fell statewide on just one day. Snowfall was observed on 5 days over parts of the state. Moderate precipitation came on December 5th – 7th. Overall the light precipitation did little to improve drought conditions over southern Indiana.

The state average temperature opened the month at 2°F above normal. Storm systems to the north pushed clouds into Indiana with light precipitation in far northern counties on December 1st and 2nd. The state temperature dipped back to normal. Weak high pressure squeezed itself overhead Indiana on December 3rd between storm systems to the north and south. Light rain fell and the state temperature slid a bit to 1°F below normal.

The weak high center drifted east the next day as a trough approached Indiana. The temperature returned to normal but light rain persisted. The trough passed through the state on December 5th and high pressure behind it raced into Indiana. The state average temperature didn't budge while precipitation fell statewide. Another trough passed over Indiana the next day allowing the rain to persist. The state temperature inched upward to 1°F above normal.

The pattern of weak weather systems in Indiana came to an end on December 7th. Low pressure systems over Manitoba and North Dakota and their cold fronts were merging into one stronger system. The new deeper core of low pressure hardly moved but its strong cold fronts wrapped around, then merged, and accelerated well ahead of the low center, advancing nearly to the Atlantic coast and stretched from New York to Florida. Cold high pressure from west Canada dove south behind the front to Indiana, finally shutting down the constant light rainfall. The state temperature fell to 2°F below normal.

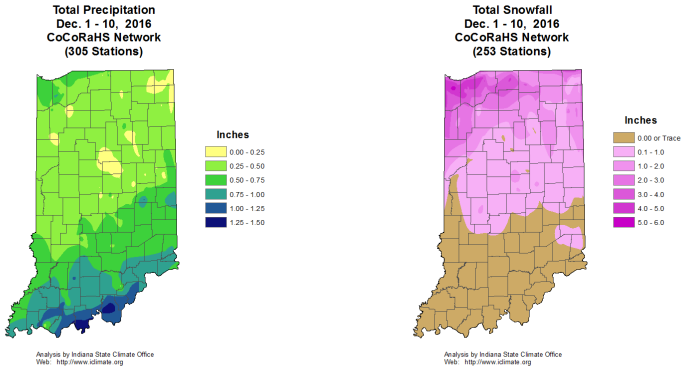
On December 8th the deep low core traveled east of Hudson Bay, dragging another cold front with it through Indiana. The state temperature plummeted to 9° below normal. An atmospheric pathway for Arctic air to reach Indiana was set up. The next day more troughs crossed the Great Lakes to reinforce the flow of cold air. Lake effect snow showers were observed. A long ridge of high pressure extended from the Yukon to Florida and kept the Arctic air pump going. The 10 day interval closed with the Indiana state temperature at 7°F below normal.

Over the 10 day interval the Indiana state temperature averaged to 2°F below normal. Usually in early December the daily maximum temperature should range from 38°F to 47°F north to south across the state. Daily minimums normally vary between 25°F in far northern counties to 30°F in the southwest corner of the state. The warmest daily temperature among cooperative network stations was 64°F on December 1st at Myers Lock & Dam. The coolest daily temperature among stations in this same network was 12°F on December 10th at New Castle 3sw.

Precipitation was frequent but light during the 10 days. Snow fell on about half of those days. According to the 10 day total snowfall map amounts fell generally north of a Terre Haute to Richmond line, trending heavier northward across the state. At least a half inch fell generally north of a Fowler to Lagrange line. Up to 6" was measured in the lake effect region on the morning of December 5th. Some of the heaviest amounts included 5.9" in Merrillville, 5.2" at Lakes of the Four Seasons, 5.0" near Chesterton and at Valparaiso, and 4.8" at Dyer. Laporte had 4.5".

Precipitation includes both rainfall and the water content of melted snowfall. On the 10 day precipitation map up to 1.5" fell south of a Corydon to Tell City line. An inch was observed generally south of Newburgh to Charlestown. At least a half inch was recorded south of a Terre Haute to Linden to Winchester line and north of Lowell to South Bend. Less than a quarter inch was seen in the Kokomo, Tipton, and Angola vicinities. Some of the largest single day amounts included 1.00" at Tell City, 0.91" in Newburgh, 0.90" outside Cannelton, and 0.81" in Corydon as listed in the morning reports of December 6th. Among the heaviest 10 day precipitation totals were 1.23" at Jeffersonville, 1.18" near Galena and Newburgh, 1.17" at New Salisbury, and 1.16" in Floyds Knobs. Regionally precipitation averaged near 0.4" in the northern third of Indiana, 0.5" in central counties, and 0.7" across the south. This equates to about 40% of normal in northern Indiana, 50% in central, and 60% of normal across the south.

There was almost no weekly change in the December 6th edition of the US Drought Monitor map for Indiana. The northern limit of the abnormally dry area (D0 category) from Gibson to Adams counties was moved south only a few miles. The moderate drought (D1 category) line was moved slightly north a few miles along its northern edge, effectively shrinking the D0 region in its extent. The severe drought (D2 category) area was unchanged, running through Harrison, Floyd, Clark, Jefferson, and Switzerland counties. The net weekly change was that the normal soil moisture region increased by 1% coverage to 52% overall, the D0 region shrank by 1% to 34% overall, the D1 region increased by 1% to 12% coverage, and the D2 region shrank by 1% to 2% overall coverage.



December 11th – 17th

Another blast of Arctic air plunged Indiana into a deep freeze much more intense than the event a week earlier. The state average temperature dove 23°F in 3 days. Snow fell every day this week

especially in the northern third of the state. The wet week helped improve Indiana drought conditions. All Indiana areas of severe drought (D2 category) were downgraded to a moderate drought (D1 category) rating this week by the US Drought Monitor.

There were hundreds of vehicle crashes due to snowy roads on December 13th. Two children died in southern Indiana on December 15th when they fell through ice. An ice storm on December 16th shut down Indiana interstates overnight, stranding hundreds of motorists. Two fatal crashes occurred in Marion county. Traffic accidents continued into December 17th. A roof collapsed on a downtown Indianapolis building due to ice buildup.

Temperatures were recovering somewhat on December 11th across Indiana as Arctic high pressure moved to the Atlantic coast. The state temperature rebounded to just 1°F below normal as a stationary front formed across southern Indiana ahead of the next storm system in Nebraska. The next day this storm traveled to Lake Huron. Its cold front passed through Indiana followed by a small area of high pressure. The state temperature barely moved at first to 2°F below normal.

On December 13th a surge of Arctic air rumbled south from west Canada to Indiana, led by a strong cold front which dropped the state temperature to 9°F below normal. The next day this cold front had reached the Atlantic coast. Another cold front had already advanced into Minnesota headed for Indiana with a reinforcement of the Arctic cold. The Indiana state temperature continued its dive to 20°F below normal. By December 15th the new cold front had weakened to a trough but did pass through Indiana and lowered the state temperature to its coldest point of the week at 24°F below normal. Arctic air had settled over the east two-thirds of the country.

On December 16th the core of high pressure had pushed east to the Atlantic coast. Warmer air began a return flow to Indiana on the backside of the high center, raising the state temperature to 12°F below normal. A storm system in Oklahoma moved to Missouri late in the day and overnight. Its warm front developed over southern Indiana, transporting moisture up and over very cold air hugging the ground, setting the stage for an overnight freezing rain event. With the arrival of the warmer air the state temperature soared to 2°F below normal to close out the week.

For the week the state temperature averaged to 10°F below normal. Typically by mid-December the daily maximum temperature should range from 35°F in far northern Indiana counties to 44°F in the far southwest corner of the state. Daily minimums should vary between 23°F and 27°F north to south across the state. The warmest daily temperature of the week among cooperative network stations was 70°F at Evansville Airport on December 17th. The coldest daily temperature among stations in this same network was -8°F at Lowell on December 15th.

Both rain and snow fell on four days this week while snow alone was observed on December 11th, 15th, and 16th. Precipitation fell statewide on December 12th, 14th, and 17th. According to the state snowfall map no snow was observed generally south of a Vincennes to Madison line. Snow amounts trended heavier to the north with 6” to 13” in the northern third of the state. About 4” to 6” was observed in counties southwest and southeast of Indianapolis. The heaviest single day snow amounts were measured across northeast Indiana on December 12th, including 7.0” at Leo, 6.7” in Fort Wayne, 6.5” at Angola, 6.0” near Elkhart, and 5.9” in the Goshen vicinity. The heaviest weekly totals were found near Elkhart with 14.5”, at Granger with 12.6”, near South Bend with 12.0”, in the Mishiwaka vicinity with 11.7”, and near Goshen with 10.5”.

On the weekly precipitation map up to 1.5" was noted in Marshall, Allen and Lawrence counties and along a Plymouth to Fort Wayne line. More than 0.75" fell in northcentral, northeast, southcentral, and far southeast Indiana areas and generally in the Bedford and Lawrenceburg areas. Less than 0.25" fell in Delaware county. The heaviest single day amounts were measured on December 12th in northeast Indiana, incuding near Lagrange with 0.91", at Leo with 0.86", nearby in Angola with 0.81", and around Huntertown with 0.73". The largest weekly totals were found at Oolitic with 1.49", Plymouth with 1.19", Leo and Jeffersonville with 1.04" and at Angola with 1.02". Regionally about 0.8" of precipitation fell across northern Indiana this week, 0.5" in central areas, and 0.8" in the south. This equates to about 130% of normal in the northern third of Indiana, 80% in central counties, and right at normal across southern Indiana.

There were more than 380 vehicle crashes as snow fell in central Indiana on December 13th ahead of the Arctic front. In Marion county there were 42 injuries in accidents. That morning state police had responded to more than 50 crashes including at least 14 with injuries and 15 slide offs. On I-70 lanes were closed all morning near Greenfield due to a multi-vehicle crash. Other lanes were closed due to ice on the roadway. A 5-vehicle crash was reported on I-70 near Indianapolis.

Two children in Pike county were pulled from a pond after they fell through the ice on December 15th. Both died later in a Jasper hospital.

On December 16th a deadly ice storm halted traffic on Indiana interstates overnight and into the next morning. In White county a semi overturned into a ditch on I-65 while another slid and turned facing into traffic. Near Lafayette police closed I-65 because of the poor road conditions overnight and reopened the road the next afternoon. Many travelers were forced to stay in their vehicles. Several had slid off the highway. Some were brought to a relief shelter in Lafayette opened by the Red Cross early the next morning.

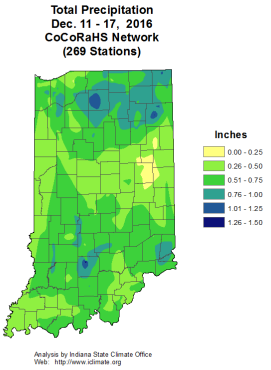
Police said 2 people died in crashes in Marion county during the ice storm. For the duration of the storm state police counted 442 crashes, 77 with injuries. About 150 slide offs were tallied. Travel warnings were issued by 25 Indiana counties. A 5-vehicle pileup had occurred on I-465.

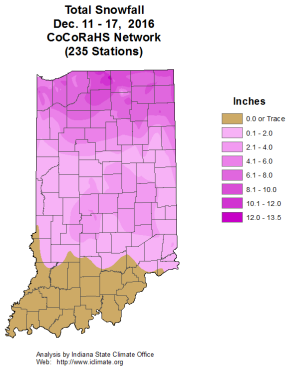
In east central Indiana a driver died when her car slid on an icy road head on into another vehicle in the town of Albany.

After being stranded overnight on Indianapolis interstates in the ice storm state police towed abandoned vehicles for impoundment on December 17th. They were declared to be a hazard to traffic on the highway.

Meanwhile in downtown Indianapolis a building roof collapsed when frozen pipes backed up on the roof. The extra weight caused the roof and building ceiling to collapse. There were no injuries.

The frequent precipitation in December helped to improve Indiana drought status. According to the December 13th edition of the US Drought Monitor, all severe drought (D2 category) areas had been erased from the Indiana map, which included parts of Harrison, Floyd, Clark, Jefferson, and Switzerland counties. Half of this former area had been added to the abnormally dry (D0 category) region and half to the moderate drought (D1 category) area. The updated partition now stands at 52% of total Indiana land unaffected by soil dryness, 35% in abnormally dry D0 status, and 13% in moderately dry D1 status.





December 18th – 24th

A third surge of Arctic air this month roared into Indiana to begin this week. But it wouldn't last long. After extreme cold on December 19th a massive warm up the rest of the week would buoy the state temperature by 27°F over the next 5 days to well above normal. The state earned a break from the persistent precipitation with four consecutive dry days in mid-week. The state saw an improvement in soil moisture status this week with a reduction in moderate drought coverage.

A cold front was forced through Indiana early on December 18th by another round of numbing cold Arctic air from Canada and Siberia. The state temperature started at 9°F below normal with snow falling across the northern half of the state and rain across the southern half. The next day the cold front was already well off the Atlantic coast and the cold ridge had anchored itself from Oklahoma to Indiana. Very cold air poured into the state, driving the temperature down to 19°F below normal, the coldest day of the week. The ridge slid east to a New England to Arkansas line by December 20th and a warm ridge backflow, the start of a significant warmup in the Midwest, was underway. The state temperature began its rebound to 10°F below normal. The next day the ridge consolidated its strength to a smaller area in the southeast states. A new storm system had formed in the Dakotas and in tandem with the high center enhanced the transfer of warmer air from the Gulf states into Indiana. The state temperature leaped upward to reach normal.

The Dakota system reached the eastern Great Lakes on December 22nd. Its cold front had passed through Indiana but the air mass behind it was of mild Pacific origin. The Arctic cold was blocked by low pressure systems and fronts in lower Canada. The Indiana state temperature responded by rising to 5°F above normal. The next day the Pacific high moved from Kansas to West Virginia. The Indiana state temperature dipped slightly to 4°F above normal. Finally on Christmas Eve a Colorado storm system crossed Indiana into Ohio with its occluded front. The Indiana state temperature rose a few more degrees to 8°F above normal to close out the week.

Over the full week the state temperature averaged to 3°F below normal. Normally at this point in December the daily maximum temperature should range from 34°F to 42°F north to south across the state. Daily minimums should vary from 21°F in far northern Indiana to 26°F in the southwest corner of the state. The warmest temperature of the week among stations in the cooperative

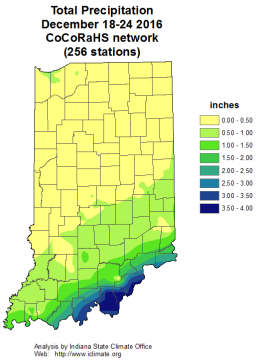
network was 67°F at Myers Lock & Dam on December 22nd. The coldest temperature among stations in this same network was -17°F at Lowell on December 19th.

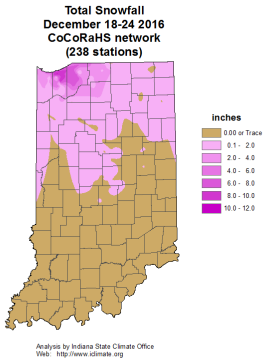
Snow fell across the northern half of Indiana on December 18th and in the northern tier of counties on December 19th. Rain was received in the southern half of the state on December 18th, was scattered on December 19th, and fell statewide on Christmas Eve. The regional precipitation trend was lighter amounts in northern Indiana to heavier southward. Regionally about 0.2" of precipitation fell across northern Indiana, 0.7" in central areas, and 0.8" in the south. These amounts equate to about 40% of normal in northern Indiana, 60% in central counties, and 150% of normal across southern Indiana.

The heaviest snow event of the week was measured on December 18th in Porter county. Two CoCoRaHS observers in Valparaiso noted 16.0" and 10.0" that day while three Portage volunteers had 11.0", 9.7", and 9.0". On the weekly snow map snowfall was mostly confined to the northern third of the state. While about 2" was typical in this region, amounts up to 11" were noted in Porter and Laporte counties obviously due to a strong lake effect.

The largest single day precipitation amounts occurred in south central Indiana on December 18th. The Elizabeth observer had 3.55" while Cannelton recorded 3.30". At Galena 3.25" was measured while the Corydon volunteer had 3.15". In New Salisbury 3.10" was noted. For the week two Galena observers had 3.93" and 3.21" while two Jeffersonville volunteers had 3.66" and 3.41". Near Milltown 3.05" was tallied. On the weekly precipitation map less than 0.5" fell across northern and central Indiana, generally north of a Vincennes to Winchester line. Precipitation trended heavier towards the Ohio River, peaking near 4" between Perry and Clark counties.

This heavier precipitation in south central Indiana benefited the Indiana drought situation according to the December 20th edition of the US Drought Monitor. The area of moderate drought (D1 category) improved by 7% from 13% coverage a week earlier to 6%. Abnormally dry area coverage (D0 category) increased from 35% to 41% coverage, picking up most of the area released by the D1 category. Areas with no soil moisture shortage improved one point from 52% coverage a week ago. Some abnormally dry areas were removed in Newton, Jasper, and north Tippecanoe counties and in fractions of adjoining counties. Parts of Dearborn and Ohio counties were returned to normal soil moisture status. Finally all points east of Washington county, including Scott, Switzerland, Jefferson, Clark, Floyd, Harrison, southern Washington, the south half of Crawford, Perry, and half of Spencer counties, were improved from moderate drought to abnormally dry classification.





December 25th – 31st

The December temperature roller coaster continued its wild swings between extremes this final week of the year. Record breaking warmth the day after Christmas ended abruptly with a 17°F temperature drop the next day. Despite the sudden fall the state average temperature remained above normal on all 7 days. Snow came only on December 30th while rain fell on four days: December 25th, 26th, 27th, and 29th. Rain showers covered the entire state on just one day, December 26th. That event was heavy enough to trigger flood warnings for northeast Indiana the following day. The additional precipitation finally made a dent in southern Indiana drought conditions. The December 27th edition of the US Drought Monitor indicated a significant improvement in Indiana soil moisture after weeks of little progress.

The state average temperature stood at 20°F above normal on Christmas Day. On the weather map Indiana was positioned between two stationary fronts, one in Michigan and the other in Tennessee. The low pressure centers connected with these fronts were located in Wyoming, Colorado, and Utah. The low centers merged the next day into one monster storm over Minnesota. The storm's warm front surged north through Indiana with its cold front in Illinois. This put Indiana squarely in a warm sector, helping to boost the Indiana daily average temperature to 24°F above normal. This set a new daily high temperature record in several Indiana towns.

On December 27th the Illinois cold front pushed its way to Pennsylvania, sweeping away the warm sector east of Indiana. The state temperature dropped sharply to just 7°F above normal. A much cooler air mass behind the cold front overtook the region between the Dakotas and Oklahoma and spread east to cover Indiana the next day. Indiana was sunny and mild with the state temperature settled at 5°F above normal.

A paired warm and cold front passed through Indiana on December 29th. A high pressure ridge in the Rocky Mountains now sprawled to overtake the east two thirds of the country, including Indiana. The state temperature held at about 5°F above normal. The next day the storm center sprinted to Maine. The warm and cold fronts in this system pushed well off the Atlantic coast, wrapped far ahead of the storm core. The next storm to the west was in Saskatchewan. There wasn't much weather change in Indiana and the state temperature held steady. Finally on New Year's Eve this new storm sped east to Lake Michigan, driving its warm front through Indiana and

its cold front to Illinois. Indiana was once again caught inside a warm air mass sector, suspended in place by the Bermuda high center. The state average temperature closed the month at 7°F above normal.

For the week the state temperature averaged to 10°F above normal. Typically in this final week of the year the daily maximum temperature would vary between 32°F in far northern counties to 42°F in the southwest corner of Indiana. Daily minimums normally range between 19°F and 25°F north to south across the state. The warmest daily temperature among stations in the cooperative station network this week was 71°F at Cannelton on December 27th. The coolest daily temperature among stations in this same network was 19°F at multiple stations on December 28th, 30th, and 31st.

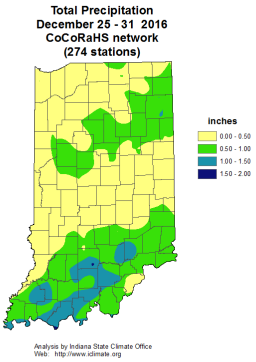
Precipitation reported from Christmas Day through December 29th fell as all rain. All snow was indicated in December 30th reports. Moderate amounts of rain were seen during the transition from very warm to much cooler temperatures. The highest single day rainfall amounts were recorded in the CoCoRaHS morning reports on December 27th when the Francisco gage had 1.43" and Russiaville collected 1.42". Two CoCoRaHS volunteers near Shoals had 1.30" and 1.26" while near Newburgh 1.27" was measured. Weekly CoCoRaHS totals included 1.53" in Francisco, 1.38" at Santa Claus, 1.37" outside Shoals, 1.34" in Newburgh, and 1.33" near Fredericksburg. On the weekly rainfall map 0.5" to 1.0" was bounded generally by a Steuben to Tippecanoe to Adams county line. A similar area was generally south of a Knox to Union county line. More than 1.0" was noted along a Spencer to Jennings county line and in Gibson and Pike counties. Elsewhere less than a half inch was common around the state. Regionally weekly precipitation averaged to about 0.5" in northern Indiana, 0.4" in central, and 0.8" across the south. This equates to 80% of normal in the north, 60% of normal across central areas, and 110% of normal in southern Indiana.

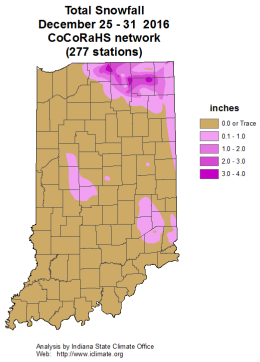
On the weekly snowfall map snow was mostly confined northeast of a St Joseph to Adams county line and in Tippecanoe, Montgomery, Hendricks, Rush, Decatur, Ripley, Dearborn, and Franklin counties. A 3" to 4" heavier band was found in St Joseph, Elkhart, and Noble counties. Most of Indiana had no snow at all this week. The highest single day snowfall amounts were observed on December 30th and ranged from 4.2" in the Elkhart vicinity to 4.0" at Kendallville, 3.6" at two points in Goshen, and 3.2" just outside South Bend. As there was only one snow day the heaviest weekly snow totals match these heaviest daily amounts among stations in the volunteer CoCoRaHS network.

The National Weather Service issued flood warnings for Allen, Dekalb, Kosciusko, Wabash, and Whitley counties on December 27th. Record daily high temperatures in northeast Indiana over the Christmas weekend along with heavy rainfall on December 26th filled rivers with runoff and snow melt on the Eel and St Joseph rivers, causing them to reach flood stage. The temperature dropped substantially soon afterwards. By December 30th up to 4" of new lake effect snow added snow cover back to the northeast Indiana landscape.

There was a huge improvement in Indiana drought conditions due to recent heavier precipitation according to the December 27th edition of the US Drought Monitor. The entire moderate drought (D1 category) region in southern Indiana was upgraded to the abnormally dry (D0 category) rating, which included all or parts of 9 counties stretching from Vanderburgh to Washington counties. In addition parts of 30 counties, mostly in southern Indiana, were upgraded to normal soil moisture status, removing the abnormally dry (D0 category) designation. The net result was that moderate drought was eliminated from the Indiana drought map and abnormally dry coverage was reduced

from 41% of total Indiana land area to 25% coverage, a 16 point improvement. The area of normal soil moisture rating improved from 53% total Indiana land area to 75% coverage, a 22 percent improvement. Given the US Drought Monitor definition of drought, all drought areas were erased throughout the state effective December 27th. The last time Indiana was drought free was on October 25th.





December 2016

Temperature

Region	Temperature	Normal	Deviation
Northwest	26.5	28.5	-2.0
North Central	26.5	28.7	-2.2
Northeast	26.7	28.6	-1.9
West Central	29.4	30.4	-1.0
Central	29.4	30.7	-1.2
East Central	29.3	30.2	-0.8
Southwest	33.6	34.5	-1.0
South Central	33.9	34.5	-0.6
Southeast	32.8	34.0	-1.1
State	29.8	31.1	-1.3

Precipitation

Region	Precipitation	Normal	Deviation	Percent of Normal
Northwest	1.77	2.66	-0.89	67
North Central	1.87	2.79	-0.92	67
Northeast	2.09	2.68	-0.59	78
West Central	1.53	2.96	-1.44	52
Central	1.76	2.99	-1.22	59
East Central	2.18	2.87	-0.69	76
Southwest	3.22	3.53	-0.31	91
South Central	3.72	3.56	0.16	105
Southeast	3.62	3.41	0.21	106
State	2.37	3.06	-0.69	77

Winter so far (same as Dec)

Temperature

Region	Temperature	Normal	Deviation
Northwest	26.5	28.5	-2.0
North Central	26.5	28.7	-2.2
Northeast	26.7	28.6	-1.9
West Central	29.4	30.4	-1.0
Central	29.4	30.7	-1.2
East Central	29.3	30.2	-0.8
Southwest	33.6	34.5	-1.0
South Central	33.9	34.5	-0.6
Southeast	32.8	34.0	-1.1
State	29.8	31.1	-1.3

Precipitation

Region	Precipitation	Normal	Deviation	Percent of Normal
Northwest	1.77	2.66	-0.89	67
North Central	1.87	2.79	-0.92	67
Northeast	2.09	2.68	-0.59	78
West Central	1.53	2.96	-1.44	52
Central	1.76	2.99	-1.22	59
East Central	2.18	2.87	-0.69	76
Southwest	3.22	3.53	-0.31	91
South Central	3.72	3.56	0.16	105
Southeast	3.62	3.41	0.21	106
State	2.37	3.06	-0.69	77

2016 Annual

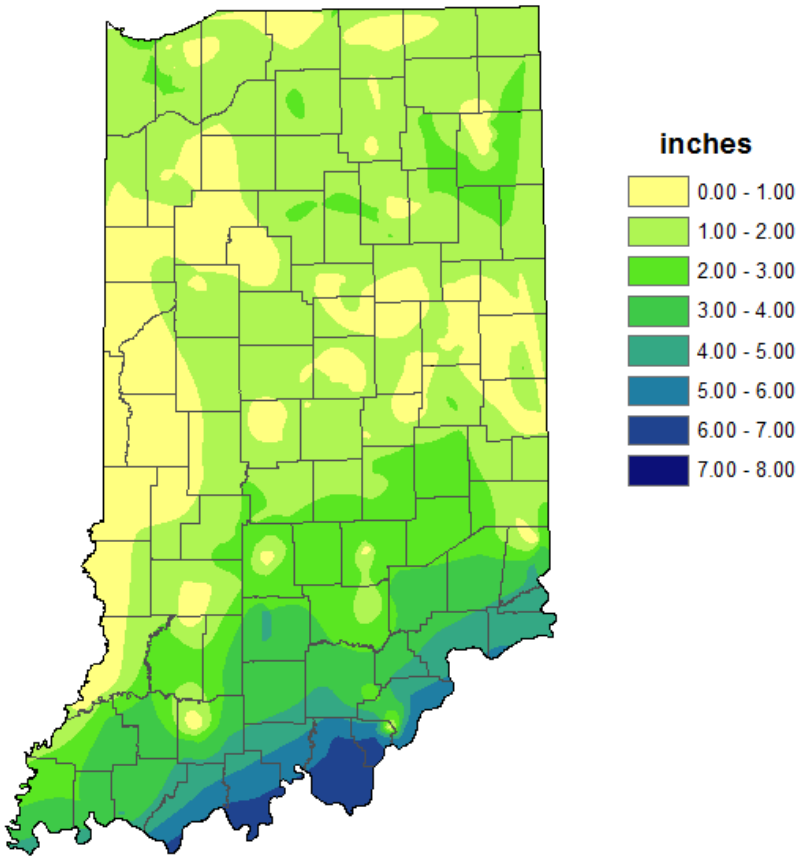
Temperature

Region	Temperature	Normal	Deviation
Northwest	52.3	50.2	2.1
North Central	52.0	49.8	2.2
Northeast	51.9	49.4	2.4
West Central	54.3	51.8	2.5
Central	54.2	51.4	2.7
East Central	53.7	50.6	3.1
Southwest	57.2	55.0	2.2
South Central	56.8	54.5	2.4
Southeast	56.1	53.7	2.5
State	54.3	51.9	2.4

Precipitation

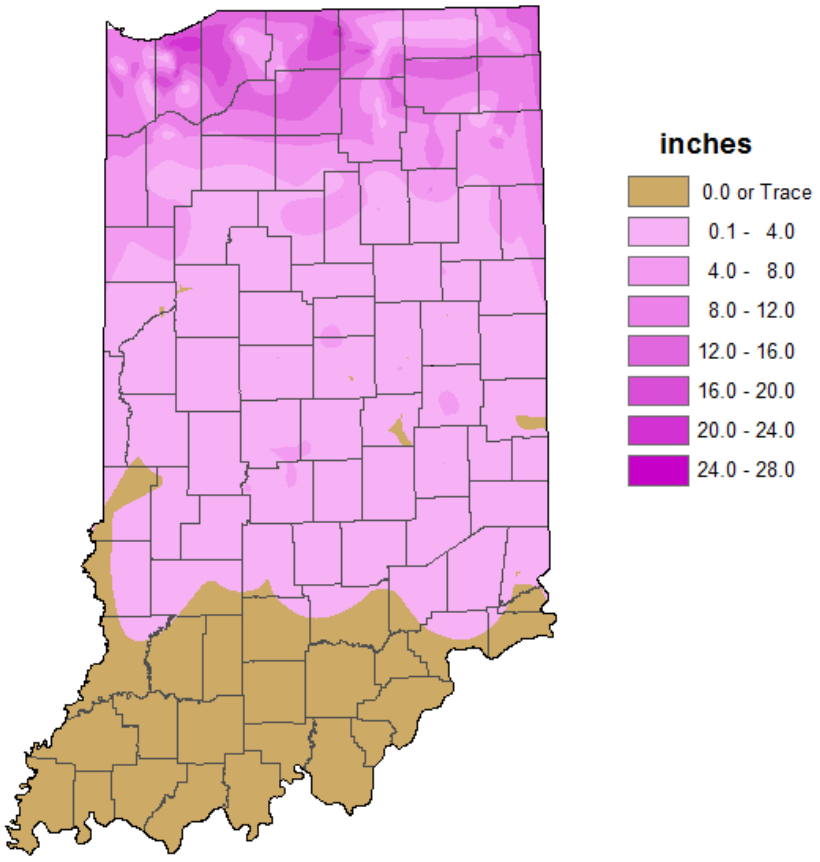
Region	Precipitation	Normal	Deviation	Percent of Normal
Northwest	42.06	38.04	4.02	111
North Central	39.36	38.22	1.14	103
Northeast	36.57	36.75	-0.18	99
West Central	41.16	41.24	-0.08	100
Central	45.91	40.74	5.17	113
East Central	40.13	39.24	0.90	102
Southwest	47.84	45.56	2.28	105
South Central	50.20	45.71	4.49	110
Southeast	46.40	44.12	2.28	105
State	43.66	41.19	2.47	106

Total Precipitation
December 2016
CoCoRaHS network
(299 stations)



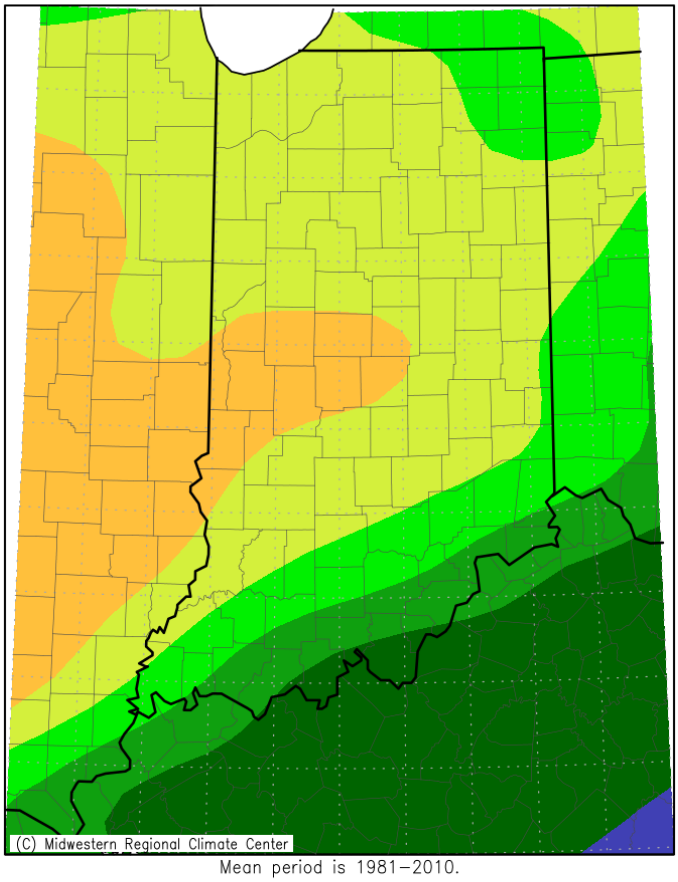
Analysis by Indiana State Climate Office
Web: http://www.iclimate.org

Total Snowfall
December 2016
CoCoRaHS network
(314 stations)

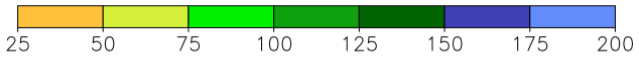


Analysis by Indiana State Climate Office
Web: http://www.iclimate.org

Accumulated Precipitation: Percent of Mean
December 1, 2016 to December 31, 2016

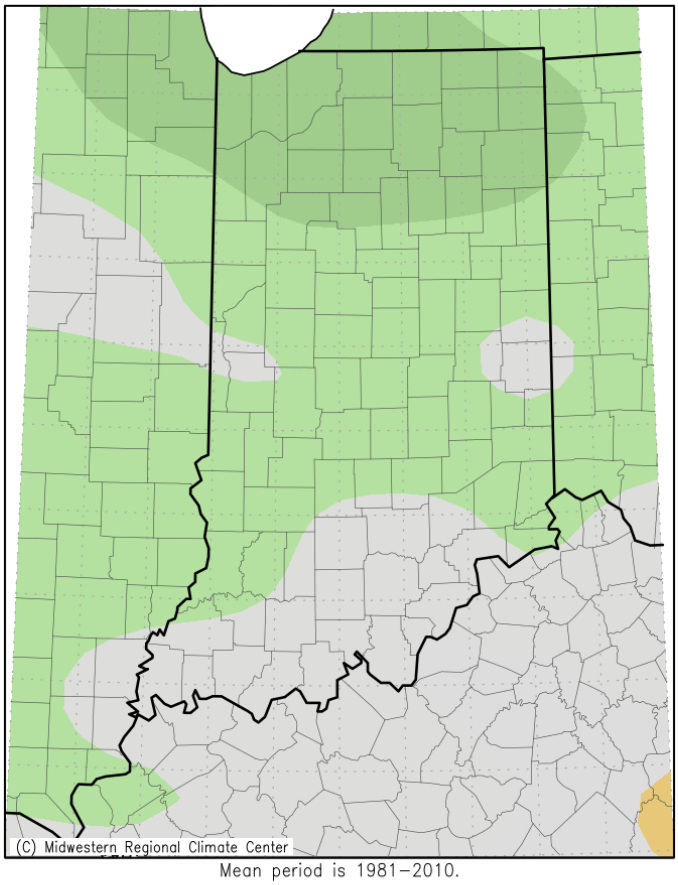


Mean period is 1981–2010.



Midwestern Regional Climate Center
cli–MATE: MRCC Application Tools Environment
Generated at: 1/9/2017 9:16:49 AM CST

Average Temperature (°F): Departure from Mean
December 1, 2016 to December 31, 2016



Mean period is 1981–2010.

Midwestern Regional Climate Center
cli–MATE: MRCC Application Tools Environment
Generated at: 1/9/2017 9:17:54 AM CST

Drought Summary from the U.S. Drought Monitor

Below is a drought summary for the state of Indiana from the U.S. Drought Monitor. Areas in white are not experiencing any drought. Yellow areas are abnormally dry, but not considered a drought. Drought begins when the moisture levels become more severe, with beige, orange, red, and brown indicating increasing levels of drought (moderate, severe, extreme, and exceptional, respectively). The table below indicates what percentage of the state is drought free, and how much of the state is in drought by degree of severity (D1 - D4 category).

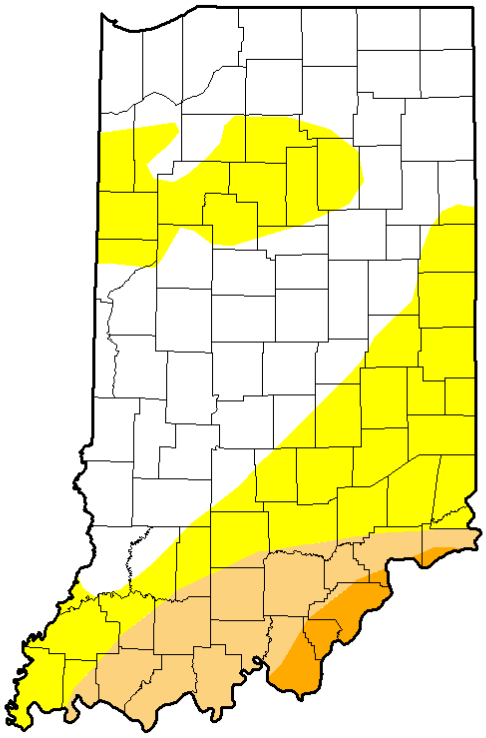
Indiana | Statistics type: Categorical Percent Area

Percent Area in U.S. Drought Monitor Categories

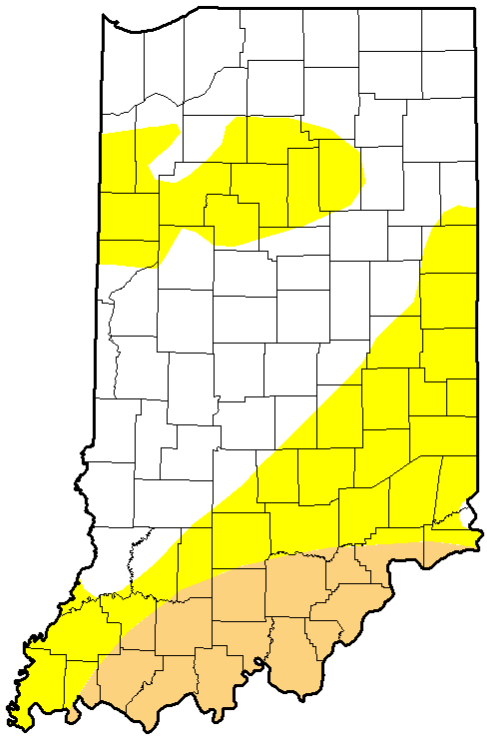
Show 25 entries | Search:

Week	None	D0	D1	D2	D3	D4
2017-01-03	76.19	23.81	0.00	0.00	0.00	0.00
2016-12-27	75.40	24.60	0.00	0.00	0.00	0.00
2016-12-20	53.38	40.54	6.08	0.00	0.00	0.00
2016-12-13	51.73	35.19	13.08	0.00	0.00	0.00
2016-12-06	51.61	34.30	11.66	2.43	0.00	0.00

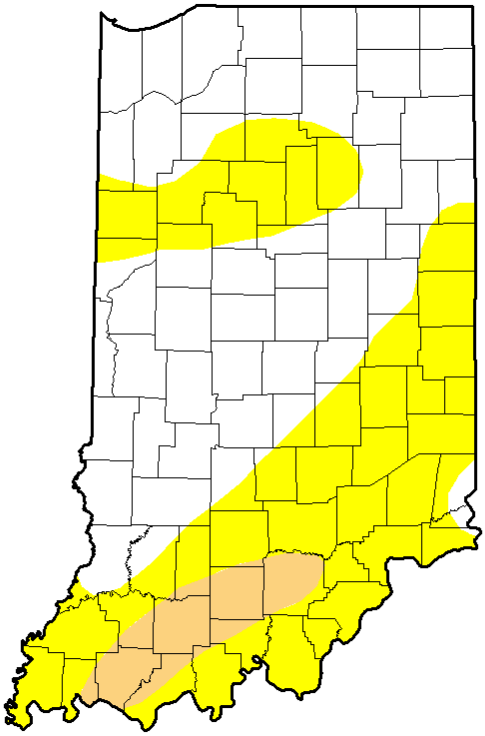
Dec 6th Drought Summary



Dec 13th Drought Summary



Dec 20th Drought Summary



Dec 27th Drought Summary