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Indiana State Climate Office

Monthly Weather Report



<http://www.iclimate.org>

Aug 16, 2016

July 2016 Climate Summary

Month Summary

There were many warmer than normal July days. A heat wave during July 21st - 25th pushed heat index values beyond 100°F. Though fewer there were enough very cool days to hold the month temperature average to barely above normal. Rainfall was generally below normal across the northeast half of the state in July and above normal throughout the southwest half. Severe weather came often with reports received on twelve July days. One injury was reported in DeKalb county when a wind-snapped tree fell on to a vehicle. Soil moisture conditions gradually improved in the last half of the month.

The July state average temperature was 75.0°F, just 0.3°F above normal. This ties July of 1969, 1974, and 2005 as the 41st warmest July on record in Indiana. A string of recent Julys were warmer than this including 2010 at 76.4°F in a tie with 1988 for the 23rd spot. The following year a 78.8°F July average claimed 6th warmest on record. Continue to 2012 when its 80.2°F July month temperature was good for 3rd warmest. The warmest July on record came in 1936 with an 80.5°F mean temperature. The day split in July 2016 was 10 days of below normal temperature, 20 days above normal, and 1 day at normal. No day had a state temperature at least 10°F above normal but there were 3 days colder than 10°F below normal. The highest temperature of the month was 97°F on July 18th at Myers Lock and Dam. The coolest temperature was 47°F on July 2nd at Crawfordsville 6se and at Jamestown 2e and again the next day at Martinsville 2sw.

The July state precipitation average was 5.21" which is 1.11" above normal. This ranks July 2016 as the 18th wettest July on record. Some recent wetter Julys occurred in 2001 with 5.46", landing in 12th place. Last year's 6.23" was the 7th wettest July. The 8.18" state average in 2003 was the 2nd wettest July, topped only by 8.55" in 1992. The heaviest one day precipitation among cooperative stations in July 2016 was 5.20" on July 4th at Stendal. The highest among CoCoRaHS stations was 4.71" that same day at Poseyville 2.8nw. The greatest month total precipitation in the cooperative network was 11.34" summed at Evansville Ft Court. In the CoCoRaHS network the highest monthly total was 10.74" tallied at Birdseye 8.2s. Widespread precipitation fell on about 20 days this month.

Regionally July 2016 precipitation was near normal in northern Indiana, 110% in central counties, and about 150% of normal in the south. Normal July precipitation ranges from 3.7" in the northeast to 4.4" in west central Indiana.

July 1st – 9th

July began cold through Independence Day, then daily temperatures recovered to near normal until July 9th. Rain fell every day with the heaviest totals in the southwest corner of the state. The only day reported with statewide coverage was July 7th. Severe weather occurred on 4 days but was far less extensive than in recent weeks. Each event was isolated to only one or a few counties at a time. Stress was reduced on crops yet rain was variable and field irrigation continued.

A zonal wind pattern dominated the country these first days of July. Storm systems rode a jet stream that primarily traveled directly west to east across northern states. This pattern promoted a tendency for fronts to slow and stall along the Ohio River.

A cold front passed through Indiana on July 1st ahead of a high pressure center moving into Minnesota. The Indiana state average temperature stood at 4°F below normal. The next day the high center migrated overhead Indiana while the leading cold front plunged south into the Gulf states. Cold air vented from Canada into Indiana, lowering the state temperature to 11°F below normal and marking the coldest day of the 9 day span. The high center drifted east to Pennsylvania on July 3rd and the Gulf front halted as a stationary front over Tennessee. The Indiana temperature was stable at 10°F below normal.

The stationary front reverted into a weak warm front on Independence Day. The front reached southern Indiana to help lift the state temperature to 5°F below normal. On July 5th the front stalled again, this time as a stationary front over the Ohio River. The state temperature continued rising to 1°F above normal. The air masses bordering the front had mixed well over the long life of the front. By July 6th the front had washed itself out of existence and disappeared from the map. The state temperature changed little, peaking at 2°F above normal. A cold front was approaching Indiana from the northwest.

The Bermuda ridge had strengthened and overspread the Gulf states on July 7th, holding off the cold front invasion of Indiana. A huge warm air sector dominated Indiana and most states east of the Mississippi River except the far north. Not able to budge the warm sector from the north, cold air from west Canada plunged through Montana into Nebraska the next day. The leading edge of the cold front advanced into Illinois, putting a squeeze on the warm air sector from the west. Indiana remained in the warm sector and the state temperature held at 2°F above normal.

On July 9th the cold air arrived and pushed east across Indiana. The state temperature dropped to 4°F below normal. As the cold air spread more east than south, the cold front slowed as it reached the Ohio River.

Over the 9 days the Indiana state temperature averaged to 3°F below normal. Typically to start off July daily maximum temperatures should range between 83°F across northern counties to 89°F in the southwest corner of the state. Daily minimums normally vary between 63°F and 68°F north to south across the state. The warmest temperature in the 9 day interval according to the cooperative station network was 92°F at Mount Vernon on July 9th. The coolest daily temperature among stations in this same network was 47°F at multiple locations on July 2nd and 3rd.

It was a rainy start to July. Rain fell somewhere in Indiana on each of the first 9 days of the month, but total amounts varied greatly from corner to corner. Only a few hundredths fell in spots of

northeast Indiana while sums were heavy in the far southwest. Less than an inch fell generally north of a Valparaiso to Greenfield to Richmond line. In contrast more than 5" drenched areas generally south of a Princeton to New Albany line. The highest local amount was about 7". In the middle of the state generally more than 3" fell south of a Terre Haute to Brookville line.

The highest single day amounts were recorded on the holiday in the southwest when the CoCoRaHS volunteer at Poseyville measured 4.71" and 3.80" was collected in Tennyson. Two observers in Boonville and another at Shoals all noted 3.10" in their gages that morning. Over all 9 days the Poseyville rain gage tallied 6.57" while Tennyson had 6.50". Two Huntingburg volunteers summed 6.33" at their locations while at Birdseye 5.67" was accumulated over the 9 days.

Regionally about 0.7" fell across northern Indiana in the 9 day interval while 1.5" was received in central, and 3.4" soaked the southern parts of the state. These amounts equate to about 80% of normal in the north, 120% in central Indiana, and 270% of normal across the southern third of the state.

Severe weather reports were received on July 3rd, 5th, 6th, and 7th. Events on all 4 days were limited in coverage to just a few counties or less.

On July 3rd fences were damaged and several trees were downed due to high winds in Posey county in extreme southwest Indiana.

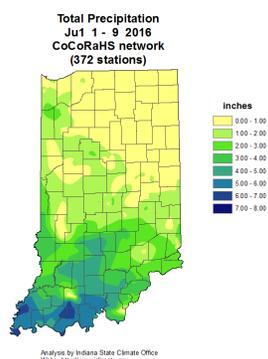
Across the state in Porter county winds were measured to 58 mph on July 5th. Power was knocked out to 1,200 homes. In Lake county a tree fell on a local road but was quickly removed.

On July 6th a tree fell on a road and 2 trees fell on power lines in Knox county. In nearby Greene county 60 mph wind gusts damaged a barn and ripped down trees.

High winds caused damage in four southwest counties on July 7th. In Posey county a garage door was bowed. In next door Vanderburgh county 60 mph winds in strong thunderstorms pulled shingles off roofs, tore down tree limbs, and uprooted trees which had pulled up parts of a roadway and a sidewalk. Many other trees fell on powerlines which left up to 23,000 homes with power outages. Trees fell on homes and buildings, including on to a church roof which collapsed. Some wind reports were near 70 mph. In Warrick county winds to 60 mph tore shingles off a store roof and caused roof and siding damage to many homes. Large toys were flipped by the wind and damage was reported to a highway in torrential rains. Spencer county reported widespread areas with trees downed by wind gusts.

Heavy rainfall in southwest Indiana improved soil moisture conditions there. The July 5th edition of the US Drought Monitor removed all D0 abnormally dry status from Knox and Gibson counties. But in areas without much rain the D0 coverage was expanded slightly. In central Indiana D0 status was enlarged in parts of Bartholomew, Johnson, Morgan, and Monroe counties. All of Brown county was added. In northern Indiana the D0 area was extended eastward. The remainder of Laporte county, most of Fulton county, all of Marshall, and part of St Joseph county were added. The net adjustment was a 2% decrease in coverage to a total 21% of Indiana land classified in D0 status. That left 79% of Indiana rated in near normal soil moisture status.

The July 5th edition of the USDA Indiana Crop Weather report noted relief to some dry areas of the state. Spotty rains left fields in the state anywhere between soaked and dry condition. Irrigation continued. Crop stress was reduced due to the cooler temperatures. Corn was recovering from wind storm damage but excessive weeds in soybeans persisted. Hay growth slowed its growth after first cutting. Wheat harvest was underway but it was slow going where lodging had occurred due to wind storms.



July 10th – 16th

The temperature cycle this week was simple: a cool start, peaking above normal in mid-week, then slumping to finish below normal. Weather changes were equally easy to follow with just a single warm front on July 12th followed by a cold frontal passage to end the week. The fronts did not go quietly, however. Wind damage was reported in 3 counties on July 12th, then in 22 counties of central and southern Indiana the next day with a few reports of hail. On July 14th two counties noted wind damage. A single report of hail came in the next day.

The northeast corner of Indiana became drier this week according to the US Drought Monitor. Indiana crops were stressed during the humid week while scattered rain helped dry areas but hurt other fields that were still saturated. Rain fell on 4 of the 7 days.

On July 10th the state temperature stood at 4°F below normal. Indiana skies were sunny with light winds as a ridge of high pressure sat close by over Michigan. The ridge slid east to New York the next day and a warm front approached Indiana from the west. The Indiana state temperature began to rise and settled right at normal. The warm front pushed north through Indiana to the Great Lakes on July 12th. The state temperature climbed further to 3°F above normal as Indiana was now firmly inside the warm air sector.

The warm sector narrowed and was squeezed toward Hudson Bay. A cold front marked the west edge of this sector which had advanced to Lake Michigan but then slowed to a halt. Indiana remained in the warm sector with the state temperature at 4°F above normal on July 13th, the warmest day of the week. Little changed on July 14th. The stationary front had inched into Michigan. With cloudy skies, wind gusts, and heavy storms over Indiana the state temperature began its slide to 1°F above normal.

On July 15th Rocky Mountain high pressure unstuck the stationary front and forced it forward as a cold front through Indiana. When cooler air took over the state temperature fell to 1°F below normal. Weak high pressure nudged the cold front to the Ohio River where it stalled. Cool air continued to flow into Indiana from the north. The state temperature ended the week at 4°F below normal.

For the week the state temperature averaged right at normal. Daily normal maximum temperatures by mid-July range between 83°F and 89°F. Daily minimums should vary from 63°F in far northern Indiana to 68°F in the far southwest. The warmest daily temperature among cooperative network stations this week was 93°F at several locations on multiple dates. The coolest daily temperature found within this same network was 52°F at Marion 2n on July 16th.

Rain was observed on the last 4 days of the week. Statewide coverage and the heaviest daily amounts were noted in the morning report of July 14th. In the CoCoRaHS network the Brazil observer measured 3.33" while three Greencastle volunteers had 3.07", 3.01", and 2.98" that day. In Kentland 2.90" was collected. For the week the Birdseye gage tallied 3.57" and two Greencastle observers summed 3.16" and 3.05". In Reelsville 2.55" was totaled while 2.23" fell near Lebanon.

The weekly rain map showed a heavy 3.0" to 3.5" band of rain along the Illinois border between Benton and Vigo counties, and in Parke, Putnam, Clay, and part of Fountain counties. Other heavy spots were in Fulton and Spencer counties. Less than a half inch was recorded in most of the rest of the northern third of the state and in Monroe county east to Ohio. Elsewhere sums from 0.5" to 2.5" were common. Regionally about 0.7" fell across the northern third of the state, 1.1" in central counties, and 0.9" in southern Indiana. These totals equate to about 85% of normal in northern and southern Indiana, and 110% of normal across the central third of the state.

Severe weather was reported on 4 consecutive days this week, on July 12th, 13th, 14th, and 15th.

Wind damage in 3 northeast counties occurred on July 12th. In Kosciusko county two trees were uprooted and 1 tree fell on a mobile home. Limbs also fell on roads. In Elkhart county high winds took down a limb while in Lagrange county a tree was downed.

Wind damage was much more extensive the next day. In Laporte county trees fell on power lines and on a road in Newton county.

Winds reached 60 mph in Adams county where limbs were down, home siding was removed, and a roof had minor damage.

In east central Indiana a tree was split in Madison county. A room addition roof collapsed and elsewhere extensive roof damage devastated a Delaware county store. In Randolph county several poles crashed on to roads and many trees fell. A tree also came down in Wayne county. In Hancock county a tree snapped.

In central Indiana trees snapped, fences were destroyed, and roof shingles were ripped off in Boone county. Air conditioning units were moved off their foundations and twisted. A patio set was found a city block away. Tree limbs were everywhere. More trees came down in Fountain county. In Putnam county a construction trailer was rolled over and utility and power lines were snagged.

Utility lines fell on Hendricks county roads. In Marion and Hancock counties limbs were split and trees pushed over by 60 mph winds. Limbs were taken down in Shelby county and trees in Parke county. Trees fell on roads and on vehicles in Vigo county.

In southern Indiana a tree fell on a road in Ripley county while power poles also fell there. More trees fell in Orange, Crawford, and Dubois counties. Winds to 60 mph pulled trees on to roads in Knox county. Winds to 65 mph pulled trees on to Gibson and Posey county roads. In Vanderburgh county 65 mph winds were recorded.

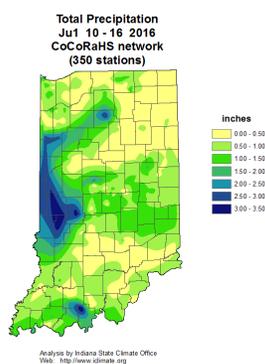
One inch diameter hail was noted in Marion county. Hail sizes of 1.25" and 1.75" diameter fell in Vigo county.

On July 14th wind gusts to 60 mph were noted in Spencer county. High winds in Switzerland county caused a tree to fall and block a highway.

On July 15th 1.00" hail was reported in Posey county. the only severe weather report of the day.

The extent of abnormally dry soils improved slightly according to the July 12th US Drought Monitor map. Soils in Brown county were upgraded to normal soil moisture status. Conditions worsened in the northeast corner of the state. A D0 rating was added to the rest of St Joseph county, most of Kosciusko county, all of Elkhart, Lagrange, and Noble counties, a part of Steuben county, most of Dekalb county, half of Allen county, and part of Adams county. The net result was an 8% deterioration in Indiana land area to a D0 rating, from 21% on July 5th to 29% on July 12th.

According to the USDA Indiana Crop Weather report edition of July 18th, light showers helped dry areas of the state but hampered wet areas in the south. Some crops were stressed this week due to the hot and humid weather. Rain did help hay and pastures, although some second cuttings have been delayed. Livestock were in good condition. There is still evidence of past wind damage in some crops. The winter wheat harvest has wrapped up.



July 17th – 23rd

How simple can a temperature cycle be? How about no cycle at all! The Indiana daily average temperature began the week below normal, then ramped steadily 1°F to 2°F every day to the end. A Midwest heat wave reached Indiana near the end of the week.

Rain occurred nearly every day too but certainly not at a steady rate. Amounts varied by region of the state and on no days did it rain statewide. Frontal passages were again rare with just two stationary fronts moving into Indiana this week.

Indiana soil moisture improved slightly according to the US Drought Monitor. Crops did improve despite the late week heat and humidity. There were two days of severe weather with a handful of counties reporting wind damage. One injury was counted.

The state temperature stood at 2°F below normal on July 17th. A stationary front lay along the Ohio River and eastward along the New England coast. The stationary front washed out the next day as two new cold fronts in Michigan were poised to enter Indiana. The state temperature nudged up a degree to 1°F below normal.

The two cold fronts merged on July 19th but afterward lacked momentum. The merged front stalled over central Indiana as a long stationary front that stretched west to Idaho. The Indiana state temperature was bumped slightly to 1°F above normal. High pressure spread across the Great Lakes the next day, forcing the stationary front to drift south to the Ohio River. The western tail of the front moved little from the previous day. The Indiana state temperature inched upward to 2°F above normal.

A high pressure ridge over the Atlantic muscled its way westward and sprawled over the east half of the country on July 21st. The old stationary front dissolved east of the Mississippi River when the ridge took over. A heat wave had arrived in Indiana. The state temperature continued its slow rise to 4°F above normal. The high humidity was more of a factor than the warm temperatures as heat index values pushed in excess of 100°F.

The ridge weakened the next day and withdrew from the Great Lakes region. This allowed a cold front to advance into Michigan and Wisconsin. Moisture was injected into Indiana, turning skies cloudy and the ridge overhead into a “dirty high”. Yet the Indiana state temperature rise persisted to 5°F above normal. On July 23rd the ridge was centered over WV. Sunshine returned to Indiana. The cold front over Michigan had stalled, unable to dislodge the strong ridge. The heat wave continued into the weekend over the Midwest and Indiana. The state temperature ended the week at 6°F above normal.

Overall the weekly state temperature averaged to 2°F above normal. Usually at this point in July the daily maximum temperature should vary from 83°F in far northern counties to 88°F in the southwest corner of Indiana. Daily minimums normally range between 63°F and 68°F north to south across the state. The warmest Indiana temperature among stations in the cooperative observer network this week was 95°F at Vincennes 5ne on July 22nd. The coolest temperature in the same network was 53°F at Evansville Museum on July 17th.

Rainfall was reported every day this week except on July 17th. It did not rain statewide during any day. The heaviest amounts were noted in Jasper county in the morning reports on July 18th.

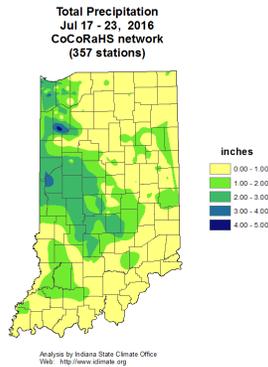
Five CoCoRaHS volunteers in the Rensselaer vicinity measured 3.90", 3.42", 3.35", 3.15", and 2.87" that morning. Some other large weekly spot totals included 3.60" near Bloomfield, 3.38" at Hobart, 3.36" in Hammond, and 3.18" at Crown Point and Valparaiso. Amounts around the state were lighter the rest of the week.

On the weekly rain map about 4" was received in the Rensselaer area and more than 3" in Jasper and Fountain counties. At least one inch fell generally west of a Laporte to Monticello to Rushville to Jasper line. A recent trend of wetter conditions in western Indiana and drier in northeastern Indiana continued. Less than a half inch was tallied in eastern parts of Steuben, DeKalb, and Allen counties. Along the Ohio River less rain was noted from Warrick to Clark counties. Franklin county rainfall was also light. Regionally about 1.4" was collected in northern Indiana, 1.7" in central, and 1.0" in the southern third of the state. These amounts equate to about 130% of normal in the north, 160% in central counties, and 110% of normal in southern Indiana.

A single report of 60 mph winds was received from Porter county on July 17th. Six counties reported wind gust damage on July 21st. On that day winds of 62 mph in Lake county took down 2 trees. Power lines and many limbs and branches were snagged in neighboring Porter county. Wind speeds to 60 mph were noted in Laporte county. A person was injured in DeKalb county when a tree fell on to a vehicle. Limbs were blown down in Fulton and Jay counties. In Shelby county 3 trees were pushed over on to a roadway.

The portion of Indiana soils which were rated abnormally dry by the US Drought Monitor decreased this week. In the July 19th edition of the USDM soils still considered abnormally dry had dropped from 29% to 24% of total Indiana land area. The remaining 76% of state land area was rated in normal soil moisture status for this time of year. Specific northern areas which had been removed from the D0 abnormally dry category included southern Jasper county, all of Cass and White counties, southern Pulaski county, and nearly all of Fulton county. In central Indiana all of Morgan and Johnson counties were removed from D0 status.

The July 18th edition of the Indiana Crop Weather report stated that light showers benefited dry areas of the state but actually hurt some wet southern areas. With the continued hot and humid weather some crops were under stress. Pastures had improved due to the rain, which benefited livestock. Wheat harvest in the state was essentially finished.



July 24th – 31st

A heat wave which gripped Indiana and the Midwest last week ended July 25th. Yet daily state average temperatures did remain above normal to the end of the month. Rain fell somewhere in Indiana every day during these final days of July. Severe weather was isolated on July 28th and 29th. There was some improvement in Indiana soil moisture but the heat and variable precipitation kept crop irrigation systems running.

The Bermuda ridge parked over the southeast states continued to pump hot and humid air into Indiana on July 24th. The state temperature averaged 6°F above normal. Relief from high heat index values began the next day as a cold front crossed Indiana. Slightly cooler but much less humid air driven south by Montana high pressure nudged the Indiana state temperature to 5°F above normal. On July 26th this cold front slowed and stalled along the Ohio River, halted by the Bermuda ridge and a zonal upper air wind pattern. The state temperature dropped slightly to 3°F above normal.

The stationary front at the Ohio River drifted slightly south the next day, enough to allow sunny skies and less humid air to overspread Indiana. The state average temperature held steady at 3°F above normal. The front reversed direction on June 28th and returned to central Indiana. Meanwhile a new cold front had traveled south to far northern Indiana. The Indiana atmosphere was squeezed from both north and south, triggering gusty storms but with no significant temperature change.

The two fronts merged on July 29th and slid south to the Ohio River. The merger set off more thunderstorms, this time with localized hail. There was very little movement on the weather map in the next 24 hours. The state temperature on July 30th changed little at 2°F above normal. As July closed the merged stationary front slipped slightly southward as a weak cold front. The state average temperature on July 31st didn't change.

After the demise of the heat wave early in the 8 day interval the state temperature held nearly constant. Overall the state temperature averaged to 3°F above normal. Typically in the final week of July daily maximum temperatures should range between 82°F and 88°F north to south across the state. Daily minimums usually vary from 63°F in far northern Indiana to 67°F in the far southwest

corner of the state. The warmest temperature of the 8 days among sites in the cooperative station network was 95°F at Woodburn 3n on July 24th, at Brookville on July 25th, and at Vincennes 5ne on July 27th. The cool spots in this same network had a low temperature of 60° at West Lafayette 6nw on July 27th and at Crawfordsville 6se on July 31st.

Less than a half inch of rain fell across most of the central third of Indiana, in Allen county, and in Knox and Daviess counties over the 8 days. Rainfall totals were heavier in both northern and southern Indiana. More than 3" was noted across the northwest and along a line generally from Greene to Bartholomew counties. At least 3" was also common south of a Princeton to Cincinnati line. Most other areas of the state received sums between these extremes.

The largest single day amounts were recorded in the morning reports of July 30th when three CoCoRaHS observers in the Valparaiso vicinity measured 3.11", 3.01", and 2.74". The Trail Creek volunteer had 2.87". The Castleton gage captured the most in the network with 3.22" on the morning of July 29th. Total precipitation over the 8 days was heaviest in northwest Indiana. The Hammond observer tallied 6.15" while in Highland 5.49" was summed. The three Valparaiso gages collected 5.14", 4.69", and 4.64" over the 8 days.

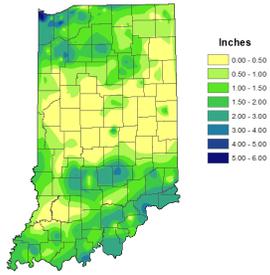
Regionally northern Indiana received about 1.1" while 0.8" was noted in central counties with 1.4" across southern Indiana. These totals equate to about 120% of normal in northern Indiana, 75% of normal in central, and 140% of normal in the southern third of the state.

Wind gusts in Vanderburgh county reached 60 mph on July 28th. One report of wind damage was received from Noble county at the opposite end of the state where a large tree was snapped. The next day hail one inch in diameter was reported in Laporte county.

The intense rainfall in northwest Indiana helped alleviate abnormally dry conditions in that region. According to the July 26th edition of the US Drought Monitor, all D0 category areas in Lake, Porter, Laporte, Newton, Jasper, Starke, and Pulaski counties were removed. All D0 rated land in the north central counties of St Joseph, Marshall, Elkhart, and Kosciusko was also eliminated. These areas combined for a 10% areal reduction in abnormally dry soils across Indiana since a week earlier. There were no changes in soil moisture ratings elsewhere across the state. The updated ratings now place 14% of Indiana soils in abnormally dry status with the remaining 86% considered as normal for this time of year.

The August 1st edition of the USDA Indiana Crop and Weather report highlighted the impact of high temperatures and variable rainfall on Indiana crop status. Generally crops still need more moisture and field irrigation continued. Soil moisture levels vary widely according to surveys returned by farmers across the state.

Total Precipitation
Jul 24 - 31, 2016
CoCoRaHS Network
(362 Stations)



Analysis by Indiana State Climate Office
Web: <http://www.idclimate.org>

July 2016

Region	Temperature	Temperature	
		Normal	Deviation
Northwest	73.4	73.6	-0.3
North Central	73.5	73.1	0.4
Northeast	73.8	72.8	1.0
West Central	74.4	74.8	-0.5
Central	74.4	74.3	0.1
East Central	74.5	73.5	1.0
Southwest	77.5	77.1	0.4
South Central	76.9	76.3	0.7
Southeast	76.4	75.5	1.0
State	75.0	74.6	0.3

Region	Precipitation	Precipitation		
		Normal	Deviation	Percent of Normal
Northwest	5.97	3.86	2.11	155
North Central	3.26	3.80	-0.54	86
Northeast	2.49	3.66	-1.16	68
West Central	5.79	4.39	1.40	132
Central	5.22	4.26	0.96	123
East Central	3.45	4.10	-0.65	84
Southwest	7.23	4.26	2.97	170
South Central	6.58	4.32	2.26	152
Southeast	5.44	4.12	1.32	132
State	5.21	4.10	1.11	127

Summer so far(June - July)

Region	Temperature	Temperature	
		Normal	Deviation
Northwest	72.4	71.9	0.6
North Central	72.1	71.3	0.8
Northeast	72.2	71.0	1.2
West Central	73.9	73.1	0.7
Central	73.5	72.5	1.0
East Central	73.4	71.7	1.7
Southwest	76.9	75.2	1.7
South Central	76.1	74.4	1.7
Southeast	75.2	73.5	1.7
State	74.0	72.8	1.2

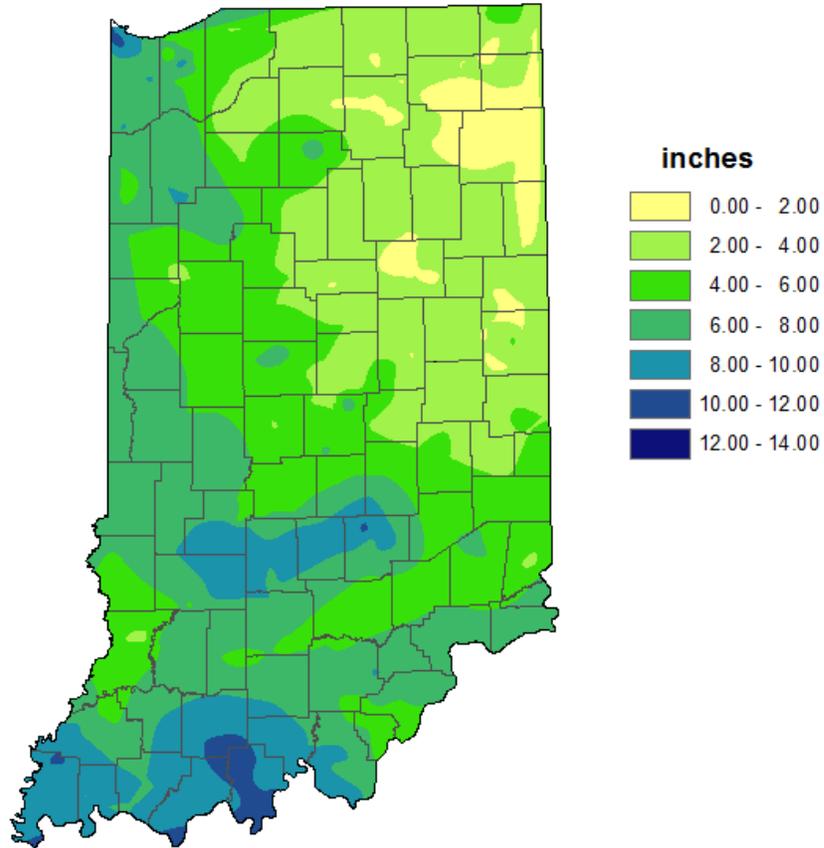
Region	Precipitation	Precipitation		
		Normal	Deviation	Percent of Normal
Northwest	9.45	8.20	1.26	115
North Central	7.71	8.10	-0.40	95
Northeast	6.96	7.74	-0.78	90
West Central	10.58	8.72	1.86	121
Central	10.48	8.36	2.13	125
East Central	7.41	8.33	-0.92	89
Southwest	10.40	8.37	2.03	124
South Central	10.75	8.41	2.34	128
Southeast	9.49	8.34	1.16	114
State	9.45	8.30	1.16	114

2016 Annual so far (Jan - Jul)

Region	Temperature		
	Temperature	Normal	Deviation
Northwest	50.6	49.2	1.4
North Central	50.3	48.7	1.6
Northeast	50.3	48.3	2.0
West Central	52.7	50.9	1.8
Central	52.7	50.5	2.2
East Central	52.2	49.6	2.6
Southwest	55.9	54.3	1.6
South Central	55.4	53.7	1.7
Southeast	54.7	52.8	1.8
State	52.8	51.0	1.8

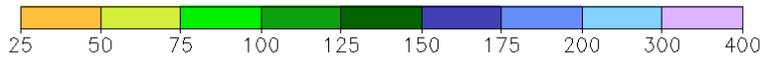
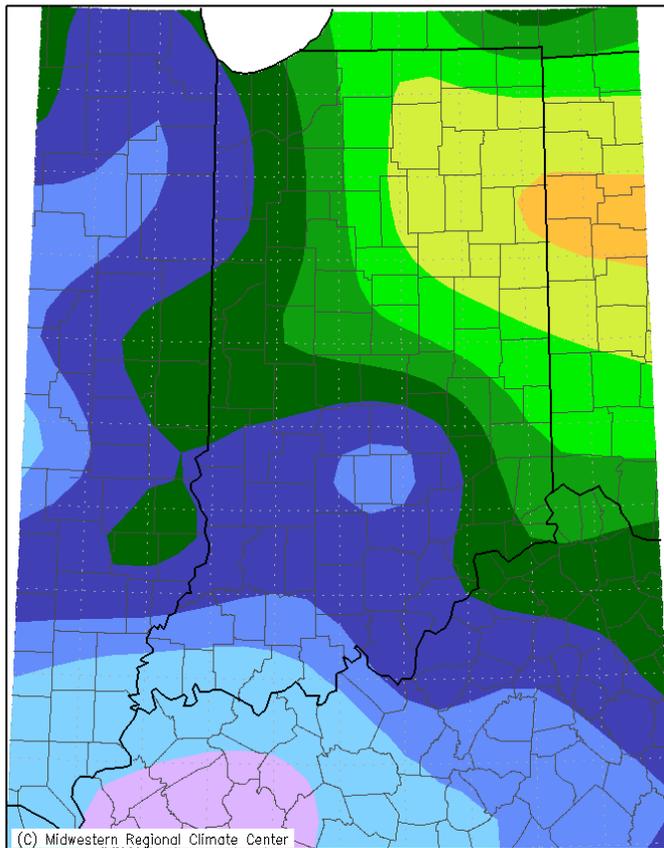
Region	Precipitation			
	Precipitation	Normal	Deviation	Percent of Normal
Northwest	22.54	22.28	0.26	101
North Central	21.02	22.20	-1.17	95
Northeast	20.01	21.47	-1.46	93
West Central	24.99	24.78	0.21	101
Central	27.43	24.57	2.86	112
East Central	23.62	23.94	-0.32	99
Southwest	31.21	27.91	3.30	112
South Central	33.01	28.02	4.99	118
Southeast	29.09	27.16	1.93	107
State	26.16	24.76	1.39	106

**Total Precipitation
July 2016
CoCoRaHS network
(400 stations)**



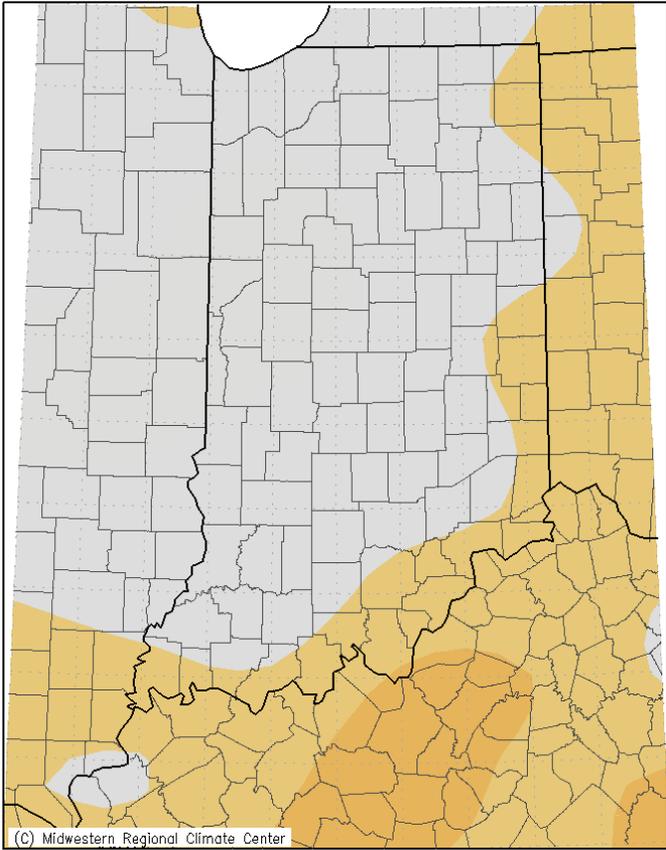
Analysis by Indiana State Climate Office
Web: <http://www.iclimate.org>

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



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 8/16/2016 10:31:37 AM CDT

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



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 8/16/2016 10:32:48 AM CDT

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

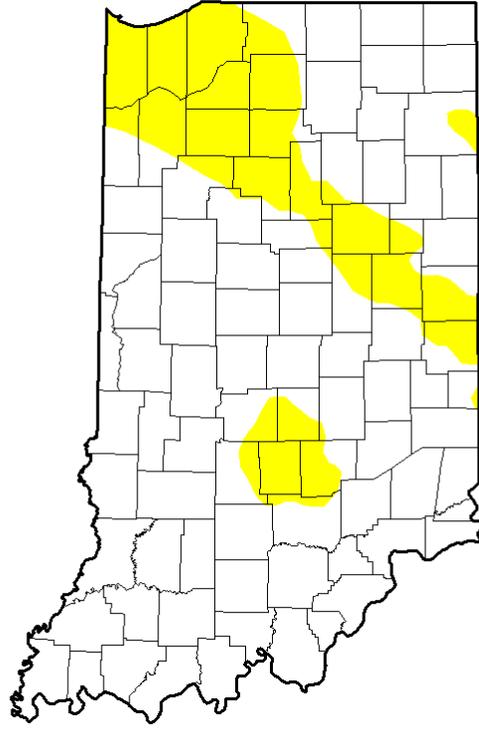
Percent Area in U.S. Drought Monitor Categories

Show 25 entries

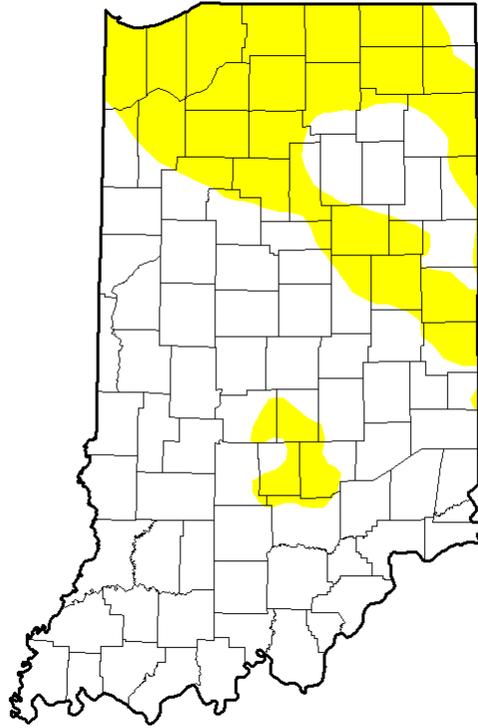
Search:

Week	None	D0	D1	D2	D3	D4
2016-07-26	86.16	13.84	0.00	0.00	0.00	0.00
2016-07-19	75.66	24.34	0.00	0.00	0.00	0.00
2016-07-12	70.83	29.17	0.00	0.00	0.00	0.00
2016-07-05	79.19	20.81	0.00	0.00	0.00	0.00

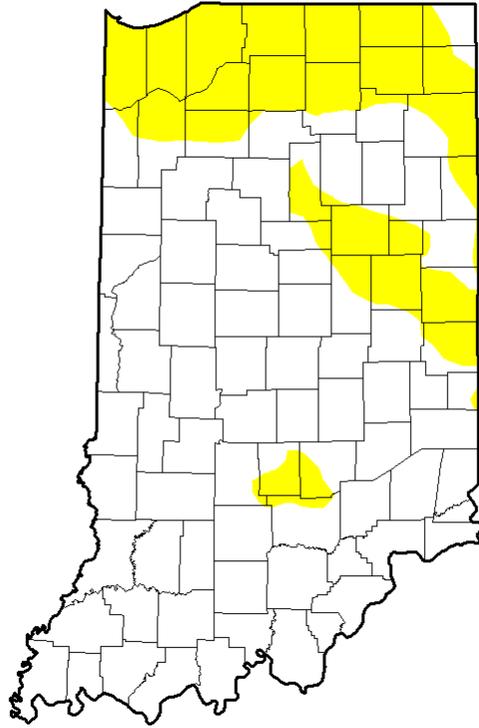
Jul 5th Drought Summary



Jul 12th Drought Summary



Jul 19th Drought Summary



Jul 26th Drought Summary

